PIONEER CT757

MODEL

SERVICE MANUAL

PIONEER®
The Art of Entertainment

Service Manual

ORDER NO.
ARP2296

STEREO CASSETTE DECK

CT-41 KU/CA
CT-900S HEM

- **Refer to the service manual ARP2217, CT–777.**
- **This manual is applicable to the CT–41/KU/CA and CT–900S/HEM types.**

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1. CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

The CT–41/KU/CA and CT–900S/HEM types are the same as the CT–777/HEM type with the exception of the following sections.
Nos. in "Remark" column correspond to the illustration on page 4.

Mark	Symbol & Description	Part No.			Remarks
		CT–777/ HEM type	CT–41/ KU/CA type	CT–900S/ HEM type	
	Main unit	Non supply	Non supply	Non supply	
	Operation unit	Non supply	Non supply	Non supply	
	Control unit	Non supply	Non supply	Non supply	
	Headphone unit	Non supply	Non supply	Non supply	
	Power switch unit	Non supply	Non supply	Non supply	
	Dolby S unit	......	Non supply	Non supply	(110)
⚠	Strain relief	CM–22B	CM–22C	CM–22B	
⚠	AC Power cord	PDG1003	PDG1015	PDG1003	
⚠	FU701, FU702 Audio fuse (T500mA)	REK–097	......	REK–097	
⚠	FU703, FU704 Fuse (T2A)	REK–103	......	REK–103	
⚠	FU701, FU702 Audio fuse (800mA)	......	REK–079	......	
⚠	FU703, FU704 Fuse (1.6A)	......	REK–074	......	
⚠	Power transformer (AC220–230/230–240V)	RTT1171	......	RTT1171	
⚠	Power transformer (AC120V)	......	RTT1157	......	
	FL filter	RAH1542	RAH1838	RAH1542	
	Door lens	RLP1026	RLP1034	RLP1034	
	Cord clamper	RNH–184	......	......	
	Door	RNK1495	RNK1730	RNK1730	
	Bonnet	RXX1376	RXX1128	RXX1128	
	Front panel assembly	RXX1385	RXX1384	RXX1383	
	Door assembly	RXX1417	RXX1415	RXX1414	
	PCB spacer	......	Non supply	PNY–404	(108)
	Unit holder	......	Non supply	Non supply	(109)
	Dolby S name plate	......	Non supply	Non supply	(111)
	Packing case	RHG1279	RHG1278	RHG1277	
	Connection cord with mini plug	......	PDE–319	......	
	Operating instructions (French, Italian, Dutch, Swedish, Spanish, Portuguese)	RRD1109	......	RRD1109	
	Operating instructions (English, German)	RRE1044	......	RRE1044	
	Operating instructions (English)	......	RRB1094	......	

MAIN UNIT

The main units (for CT–41/KU/CA and CT–900S/HEM types) are the same as the main unit (for CT–777/HEM type) with the exception of the following sections.

Mark	Symbol & Description	Part No.			Remarks
		CT–777/ HEM type	CT–41/ KU/CA type	CT–900S/ HEM type	
	C391	······	CKPUYF103Z25	······	
	R303, R304	RD1/6PM562J	RD1/6PM622J	RD1/6PM622J	
	R382	RD1/6PM123J	RD1/6PM202J	RD1/6PM202J	
	VR105, VR106	RCP1017	RCP1080	RCP1080	
	JA41, JA42 Remote control jack	······	RKN1004	······	

OPERATION UNIT

The operation units (for CT–41/KU/CA and CT–900S/HEM types) are the same as the operation unit (for CT–777/HEM type) with the exception of the following sections.

Mark	Symbol & Description	Part No.			Remarks
		CT–777/ HEM type	CT–41/ KU/CA type	CT–900S/ HEM type	
	D921–D923	······	1SS254	······	
	S951	RSB1001	RSB1003	RSB1003	
	R954	RD1/6PM223J	RD1/6PM274J	RD1/6PM223J	
	R955	······	RD1/6PM102J	······	
	V921	RAW1056	RAW1069	RAW1069	

CONTROL UNIT

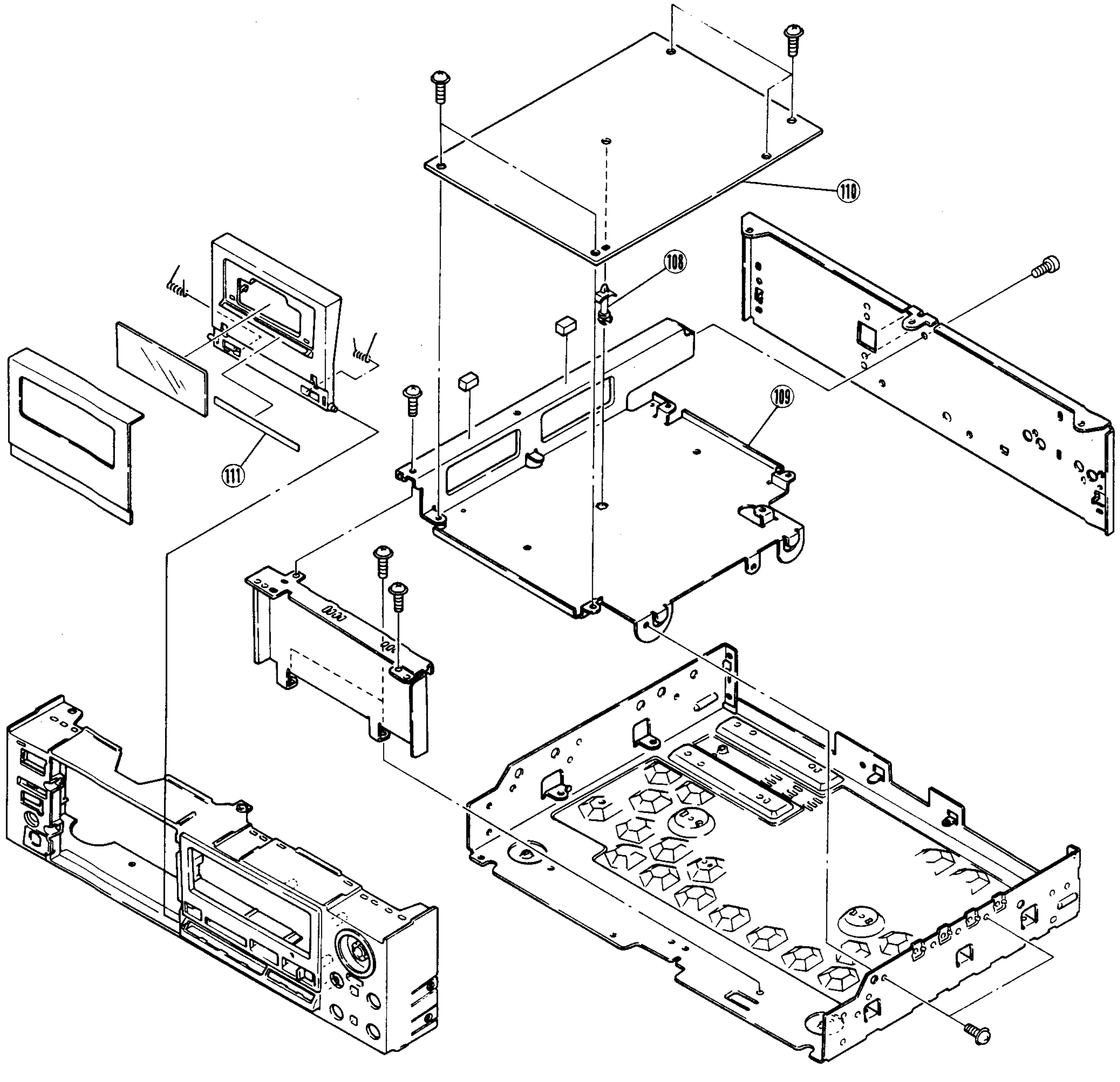
The control units of CT–41/KU/CA and CT–900S/HEM types are the same as that of CT–777/HEM type for the service supply parts.

HEADPHONE UNIT

The headphone units of CT–41/KU/CA and CT–900S/HEM types are the same as that of CT–777/HEM type for the service supply parts.

POWER SWITCH UNIT

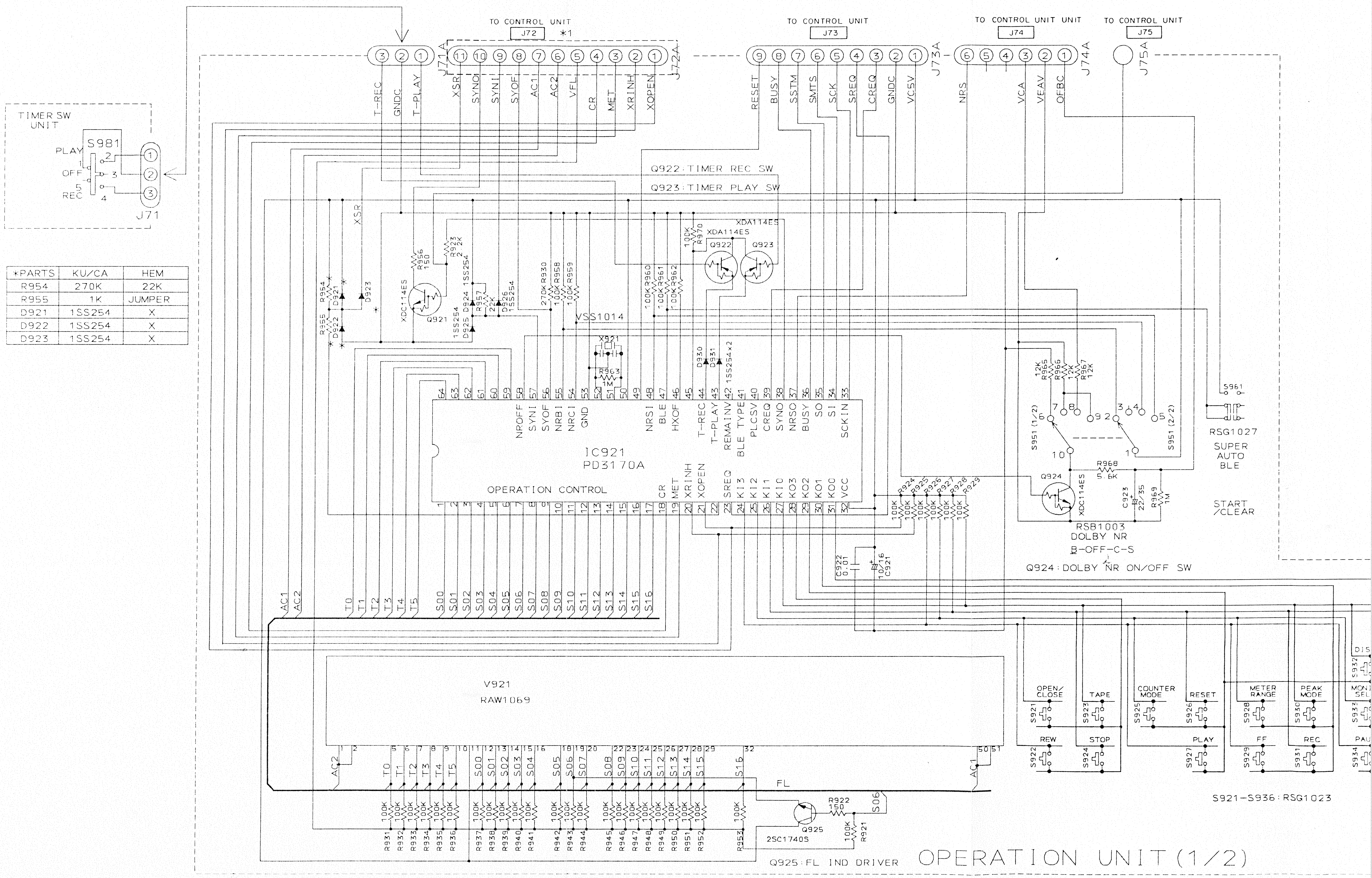
The power switch units of CT–41/KU/CA and CT–900S/HEM types are the same as that of CT–777/HEM type for the service supply parts.


(110)
(108)
(109)
(111)

*1

	KU/CA	HEM
J72A	11PIn	10PIn

*PARTS	KU/CA	HEM
R954	270K	22K
R955	1K	JUMPER
D921	1SS254	X
D922	1SS254	X
D923	1SS254	X


TO CONTROL UNIT
J72
*1
J71A
J72A
TO CONTROL UNIT
J73
J73A
TO CONTROL UNIT UNIT
J74
J74A
TO CONTROL UNIT
J75
J75A
T-REC
GNDC
T-PLAY
XSR
SYNO
SYNI
SYOF
AC1
AC2
VFL
CR
MET
XRINH
XOPEN
RESET
BUSY
SSTM
SMTS
SCK
SREQ
CREQ
GNDC
VC5V
NRS
VCA
VEAV
OFBC
TIMER SW UNIT
S981
PLAY
OFF
REC
J71
Q922:TIMER REC SW
Q923:TIMER PLAY SW
XDA114ES
Q922
Q923
R970 100K
R960 R961 R962 100K
D930 D931 1SS254x2
XDC114ES
Q921
R956 150
R923 R924 2.2K
D924 1SS254
D925 1SS254
D926 1SS254
R957 2.2K
R954
R955
D921
D922
D923
R930 270K
R958 100K
R959 100K
VSS1014
X921
R963 1M
IC921
PD3170A
OPERATION CONTROL
NROFF
SYNI
SYOF
NRBI
NRCI
GND
NRSI
BLE
HXOF
T-REC
T-PLAY
REMAINV
BLE TYPE
PLCSV
CREQ
SYNO
NRSO
BUSY
SO
SI
SCKIN
CR
MET
XRINH
XOPEN
SREQ
KI3
KI2
KI1
KI0
KO3
KO2
KO1
KOC
VCC
R924 R925 R926 R927 R928 R929 100K
C922 0.01
C921 10/16
R965 12K
R966 12K
R967 12K
S951 (1/2)
S951 (2/2)
R968 5.6K
Q924
XDC114ES
C923 22/35
R969 1M
RSB1003
DOLBY NR
B-OFF-C-S
Q924:DOLBY NR ON/OFF SW
S961
RSG1027
SUPER AUTO BLE
START /CLEAR
AC1
AC2
T0 T1 T2 T3 T4 T5
S00 S01 S02 S03 S04 S05 S06 S07 S08 S09 S10 S11 S12 S13 S14 S15 S16
V921
RAW1069
FL
R931 R932 R933 R934 R935 R936 R937 R938 R939 R940 R941 R942 R943 R944 R945 R946 R947 R948 R949 R950 R951 R952 R953 100K
Q925
2SC1740S
R922 150
R921 100K
S06
Q925:FL IND DRIVER
OPEN/ CLOSE
TAPE
COUNTER MODE
RESET
METER RANGE
PEAK MODE
REW
STOP
PLAY
FF
REC
S921 S922 S923 S924 S925 S926 S927 S928 S929 S930 S931
S921-S936:RSG1023

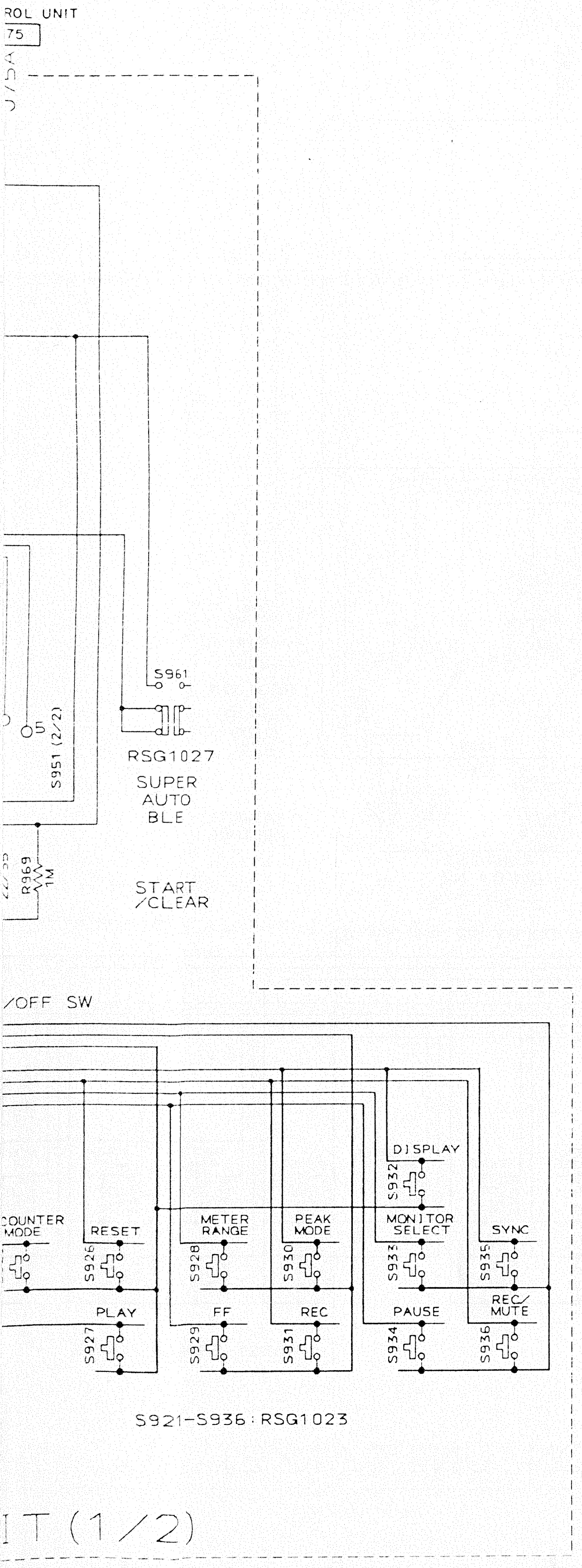
OPERATION UNIT(1/2)

A

B

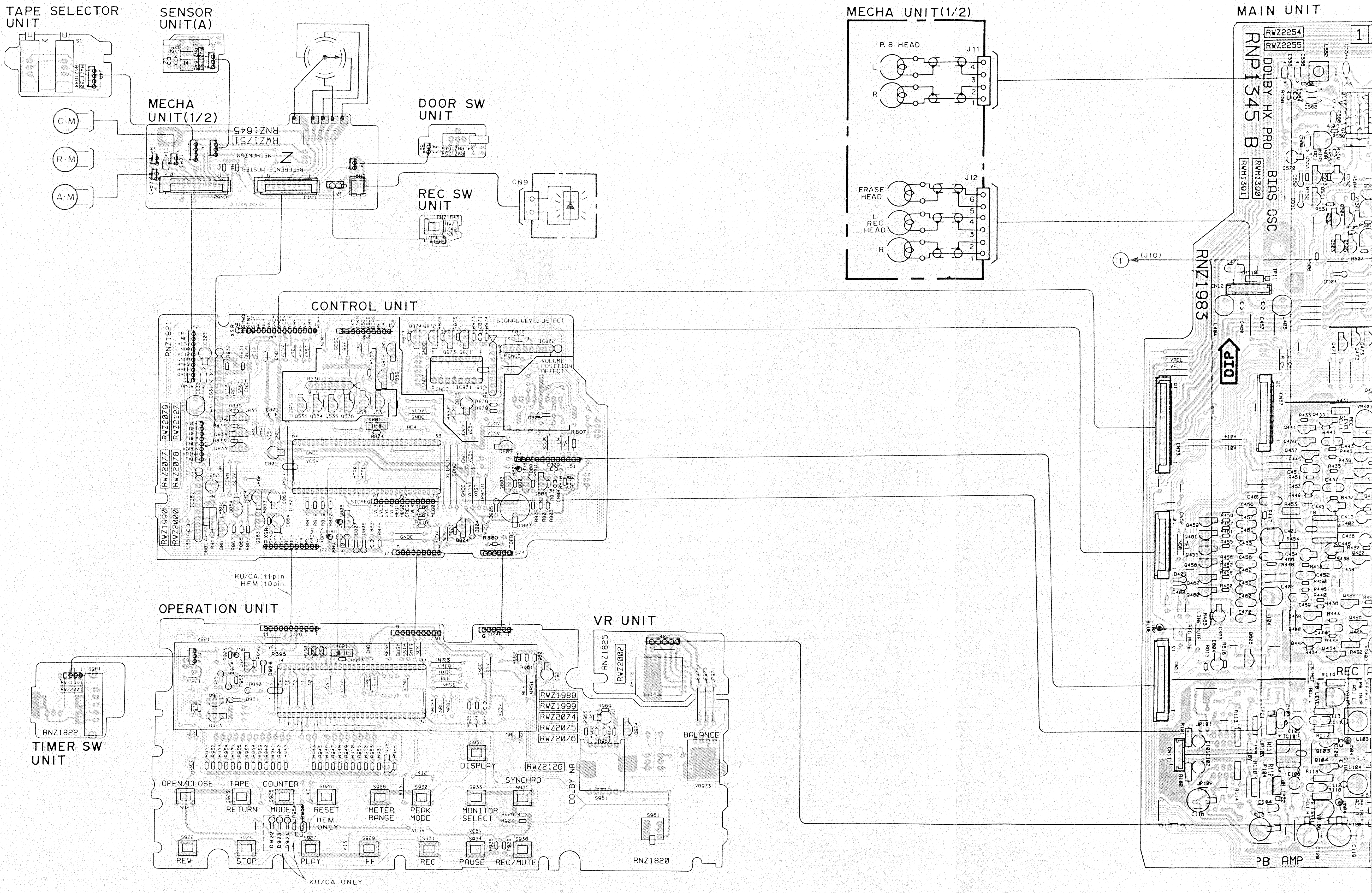
C

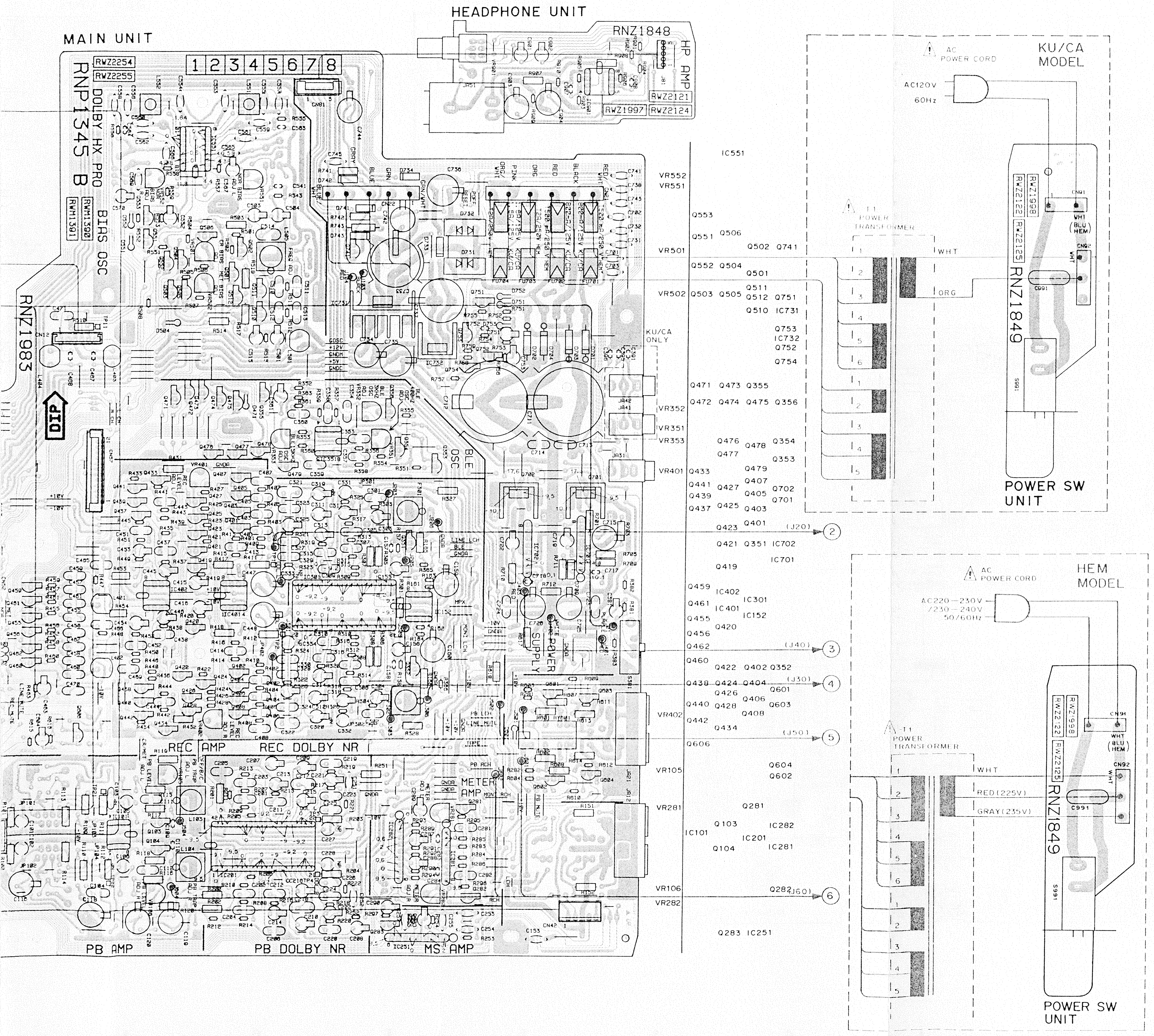
D

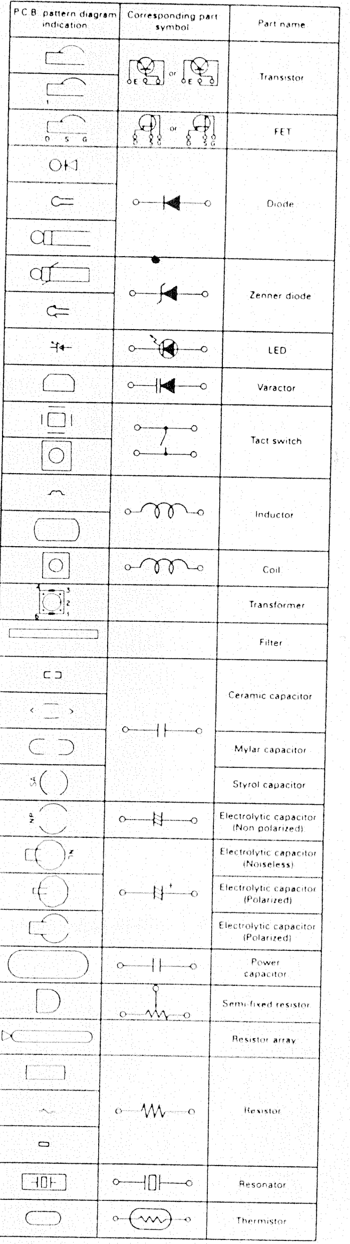

ROL UNIT
75
S961
S951 (2/2)
RSG1027
SUPER
AUTO
BLE
R969
1M
START
/CLEAR
/OFF SW
DISPLAY
S932
COUNTER
MODE
RESET
S926
METER
RANGE
S928
PEAK
MODE
S930
MONITOR
SELECT
S933
SYNC
S935
REC/
MUTE
PLAY
S927
FF
S929
REC
S931
PAUSE
S934
S936
S921–S936 : RSG1023
IT (1/2)

3. P. C. BOARDS CONNECTION DIAGRAM

- View from component side

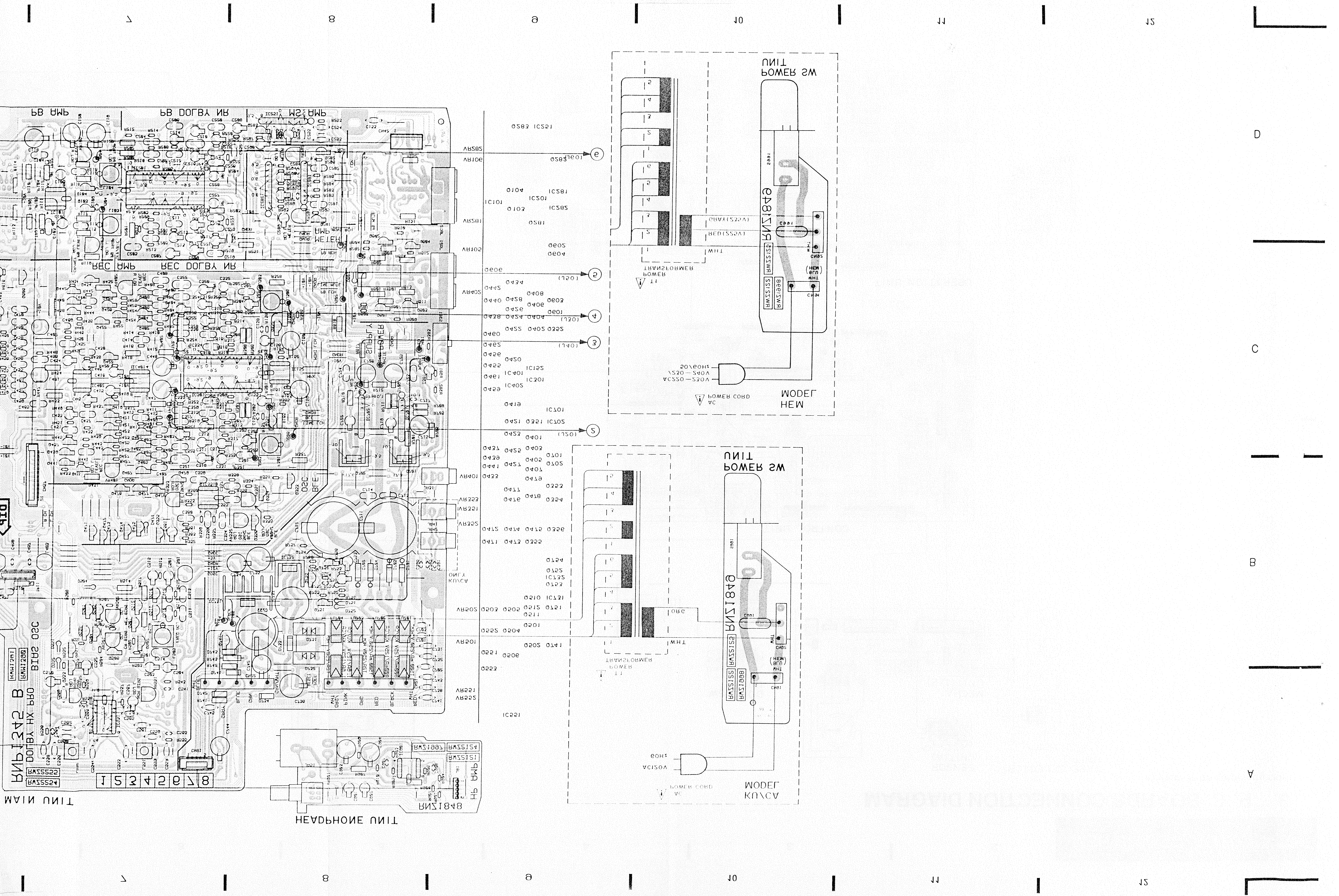

TAPE SELECTOR UNIT
SENSOR UNIT(A)
MECHA UNIT(1/2)
RNZ1645
RWZ1751
C·M
R·M
A·M
DOOR SW UNIT
REC SW UNIT
CN9
MECHA UNIT(1/2)
P.B HEAD
L
R
J11
J12
ERASE HEAD
L REC HEAD
R
MAIN UNIT
RWZ2254
RWZ2255
RNP1345 B
DOLBY HX PRO BIAS OSC
RWM1300
RWM1301
RNZ1983
(J10)
DIP
REC
PB AMP
CONTROL UNIT
RNZ1821
SIGNAL LEVEL DETECT
VOLUME POSITION DETECT
RWZ2079
RWZ2127
RWZ2077
RWZ2078
RWZ1990
RWZ2000
R807
R880
KU/CA:11pin
HEM:10pin
OPERATION UNIT
VR UNIT
RNZ1825
RWZ2002
RWZ1989
RWZ1999
RWZ2074
RWZ2075
RWZ2076
RWZ2126
RNZ1822
TIMER SW UNIT
DISPLAY
SYNCHRO
DOLBY NR
BALANCE
OPEN/CLOSE
TAPE RETURN
COUNTER MODE
RESET
HEM ONLY
METER RANGE
PEAK MODE
MONITOR SELECT
REW
STOP
PLAY
FF
REC
PAUSE
REC/MUTE
RNZ1820
KU/CA ONLY
A
B
C
D
1
2
3
4
5
6


HEADPHONE UNIT
RNZ1848
HP AMP
RWZ2121
RWZ1997
RWZ2124
MAIN UNIT
RWZ2254
RWZ2255
1 2 3 4 5 6 7 8
RNP1345 B
DOLBY HX PRO
BIAS OSC
RWM1590
RWM1591
RNZ1983
DIP
IC551
VR552
VR551
Q553
Q551 Q506
VR501 Q502 Q741
Q552 Q504
Q501
VR502 Q503 Q505
Q511 Q751
Q512 IC731
Q510
Q753
IC732
Q752
Q754
KU/CA ONLY
Q471 Q473 Q355
Q472 Q474 Q475 Q356
VR352
VR351
VR353
Q476 Q478 Q354
Q477 Q353
VR401 Q433 Q479
Q441 Q427 Q407 Q702
Q439 Q405 Q701
Q437 Q425 Q403
Q423 Q401 (J20)
Q421 Q351 IC702
IC701
Q419
Q459 IC402
Q461 IC401 IC301
Q455 IC152
Q456 Q420
Q462 (J40)
Q460
Q422 Q402 Q352
Q438 Q424 Q404 (J30)
Q426 Q601
Q440 Q428 Q406 Q603
Q442 Q408
VR402
Q434 (J50)
Q606
Q604
VR105 Q602
Q281
VR281
Q103 IC282
IC101 IC201
Q104 IC281
VR106 Q282 (J60)
VR282
Q283 IC251
REC AMP
REC DOLBY NR
METER AMP
POWER SUPPLY
PB AMP
PB DOLBY NR
MS AMP
① ② ③ ④ ⑤ ⑥
AC POWER CORD
KU/CA MODEL
AC120V
60Hz
T1 POWER TRANSFORMER
WHT
ORG
RWZ1998
RWZ2122
RWZ2125
RNZ1849
CN91
CN92
WHT (BLU HEM)
C991
S991
POWER SW UNIT
AC POWER CORD
HEM MODEL
AC220 – 230V
/230 – 240V
50/60Hz
T1 POWER TRANSFORMER
WHT
RED(225V)
GRAY(235V)
RWZ1998
RWZ2122
RWZ2125
RNZ1849
CN91
CN92
WHT (BLU HEM)
C991
S991
POWER SW UNIT
7 8 9 10 11 12
A B C D



P.C.B. pattern diagram indication	Corresponding part symbol	Part name
		Transistor
		FET
		Diode
		Zenner diode
		LED
		Varactor
		Tact switch
		Inductor
		Coil
		Transformer
		Filter
		Ceramic capacitor
		Mylar capacitor
		Styrol capacitor
		Electrolytic capacitor (Non polarized)
		Electrolytic capacitor (Noiseless)
		Electrolytic capacitor (Polarized)
		Electrolytic capacitor (Polarized)
		Power capacitor
		Semi-fixed resistor
		Resistor array
		Resistor
		Resonator
		Thermistor

1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
3. The capacitor terminal marked with ▭ shows negative terminal.
4. The diode marked with ○ shows cathode side.
5. The transistor terminal marked with ▭ shows emitter.


MAIN UNIT
RNP1345 B
DOLBY HX PRO
BIAS OSC
PB AMP
PB DOLBY NR
MS AMP
REC AMP
REC DOLBY NR
METER AMP
HEADPHONE UNIT
RNZ1848
HP AMP
POWER SW UNIT
RNZ1849
POWER TRANSFORMER
AC POWER CORD
HEM MODEL
AC220–230V
AC220–240V
50/60Hz
GRAY(235V)
RED(225V)
WHT
ORG
KU/CA MODEL
AC120V
60Hz
KU/CA ONLY
7
8
9
10
11
12
A
B
C
D

- View from component side

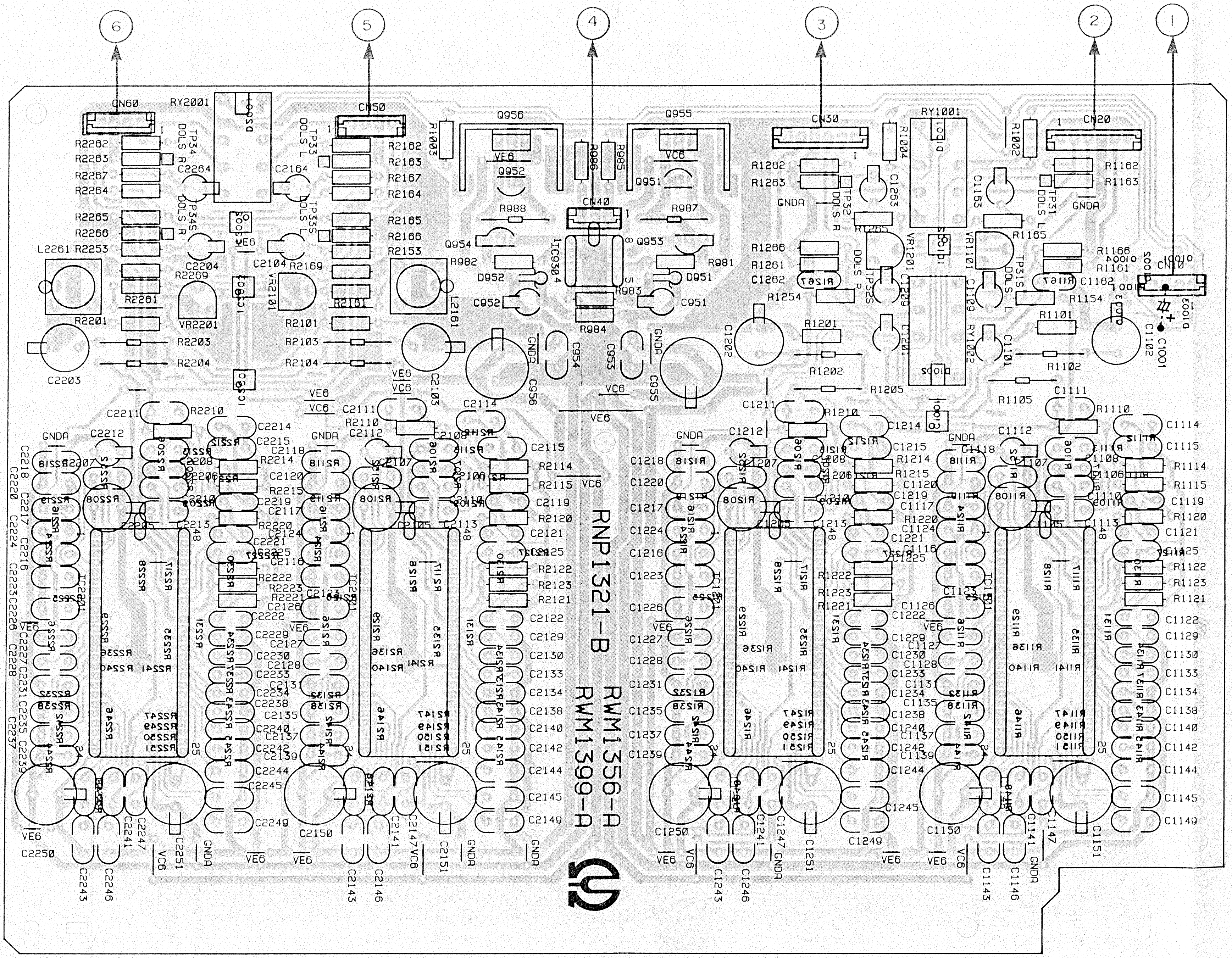
- View from

A

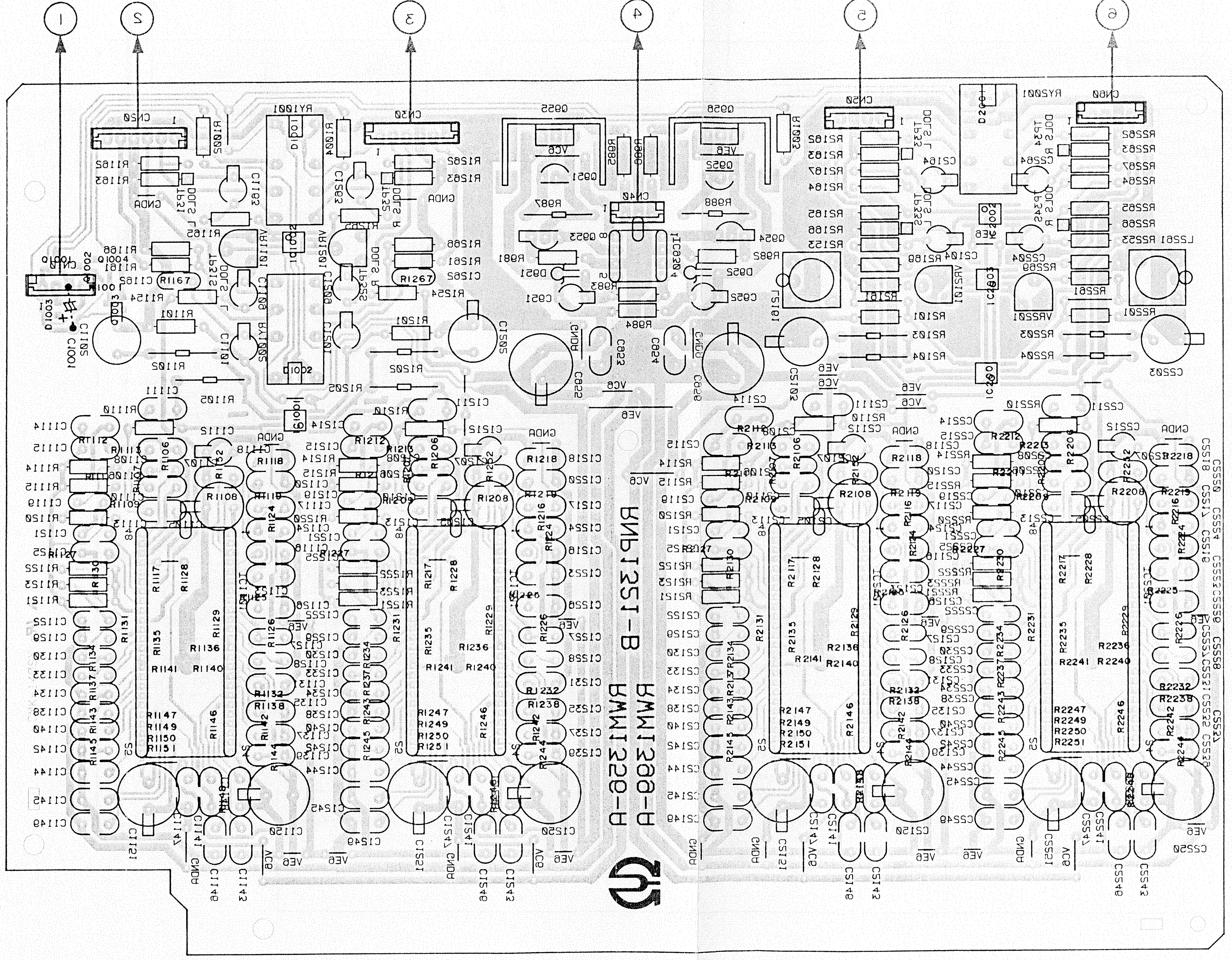
B

C

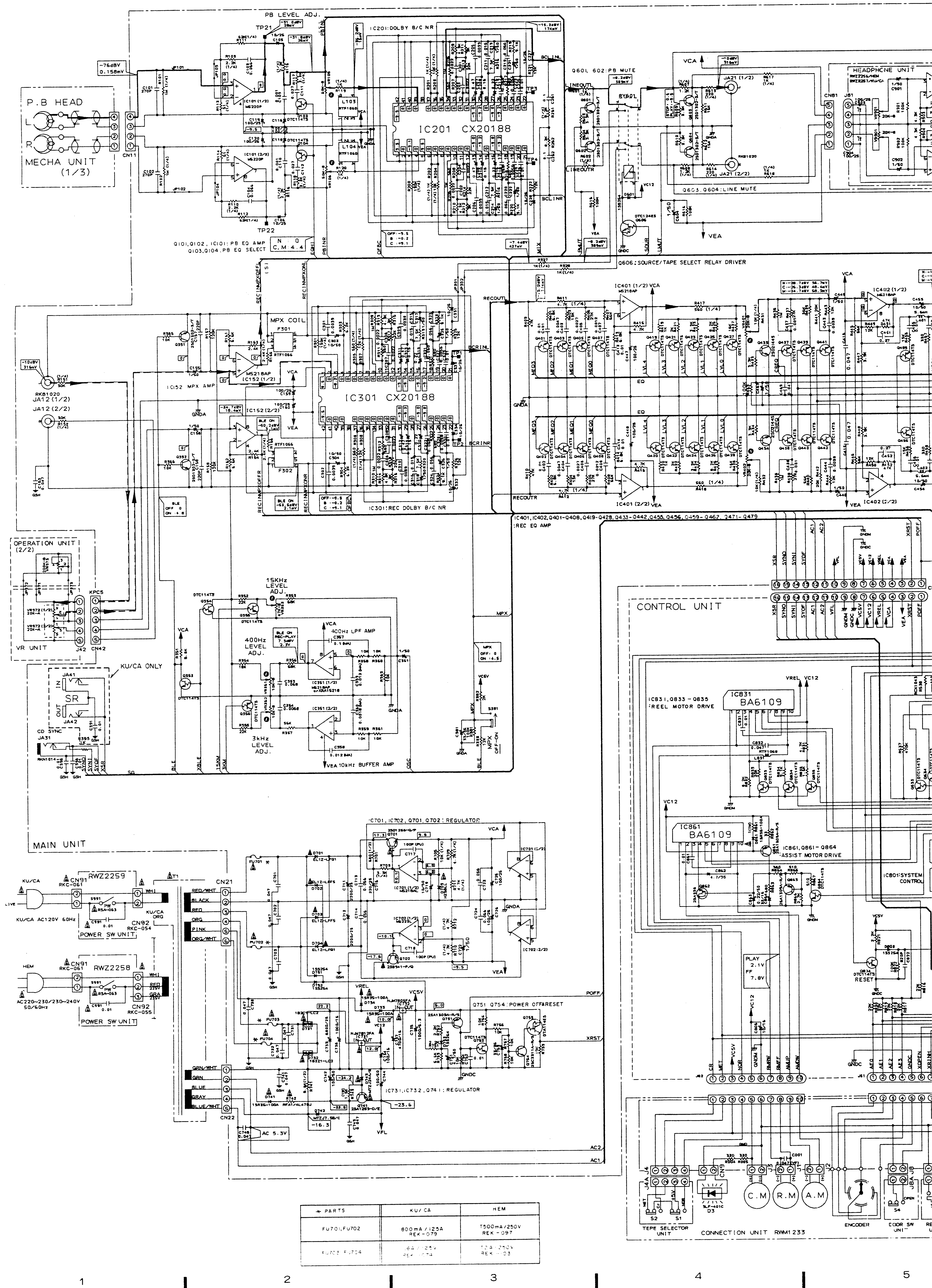
D


6
5
4
3
2
1
CN60
RY2001
CN50
Q956
Q955
CN40
CN30
RY1001
CN20
CN10
IC9504
Q952
Q951
Q954
Q953
D952
D951
L2261
L2101
VR2201
VR1101
VR1201
C2203
C956
C955
C1202
C1001
VE6
VC6
GNDA
RNP1321-B
RWM1356-A
RWM1399-A

- View from soldering side

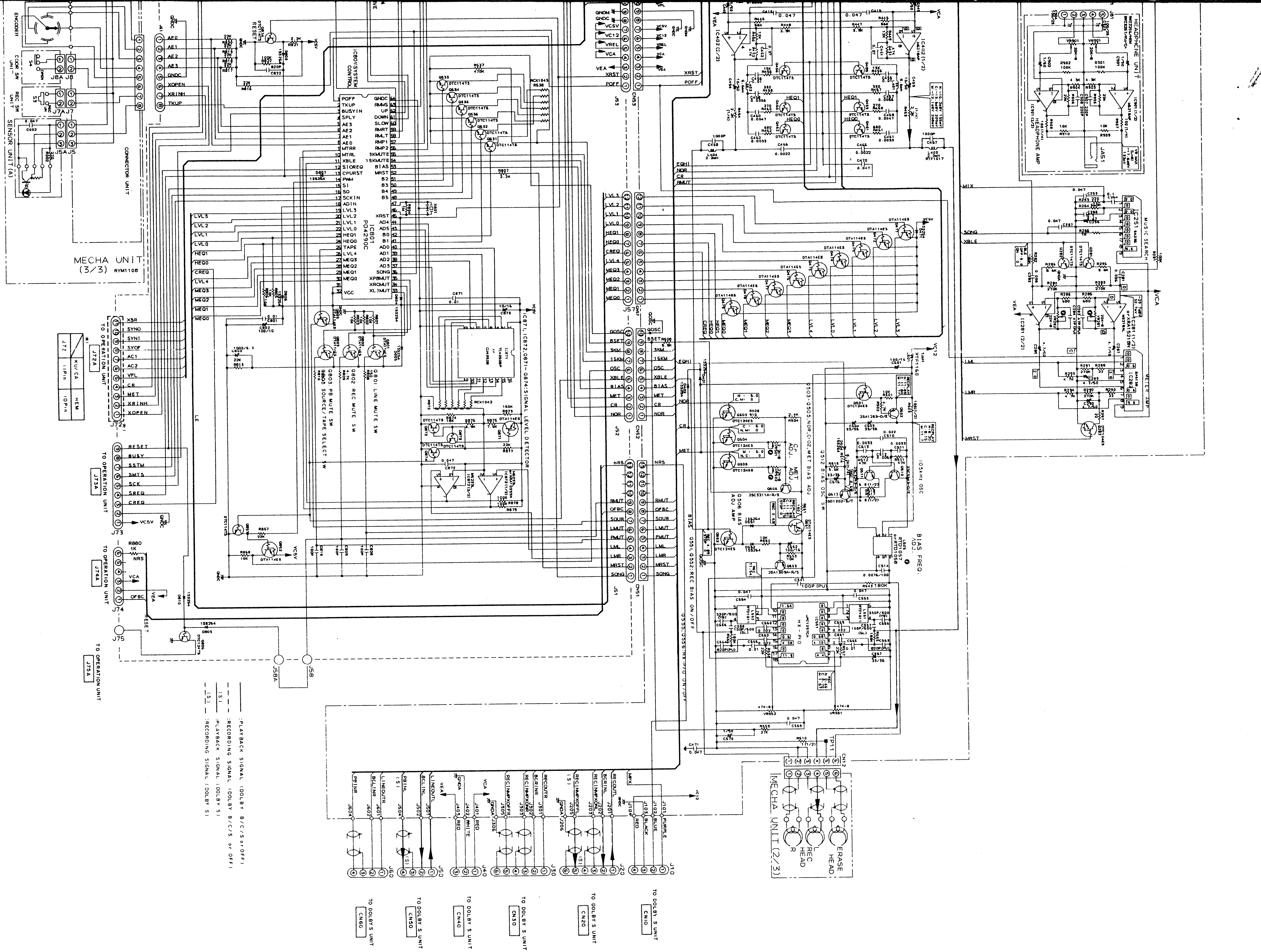

7
8
9
10
11
12
A
B
C
D
①
②
③
④
⑤
⑥
CN20
CN30
CN40
CN50
CN60
RY1001
RY2001
RNP1252-B
RWM1256-A

2. SCHEMATIC DIAGRAM

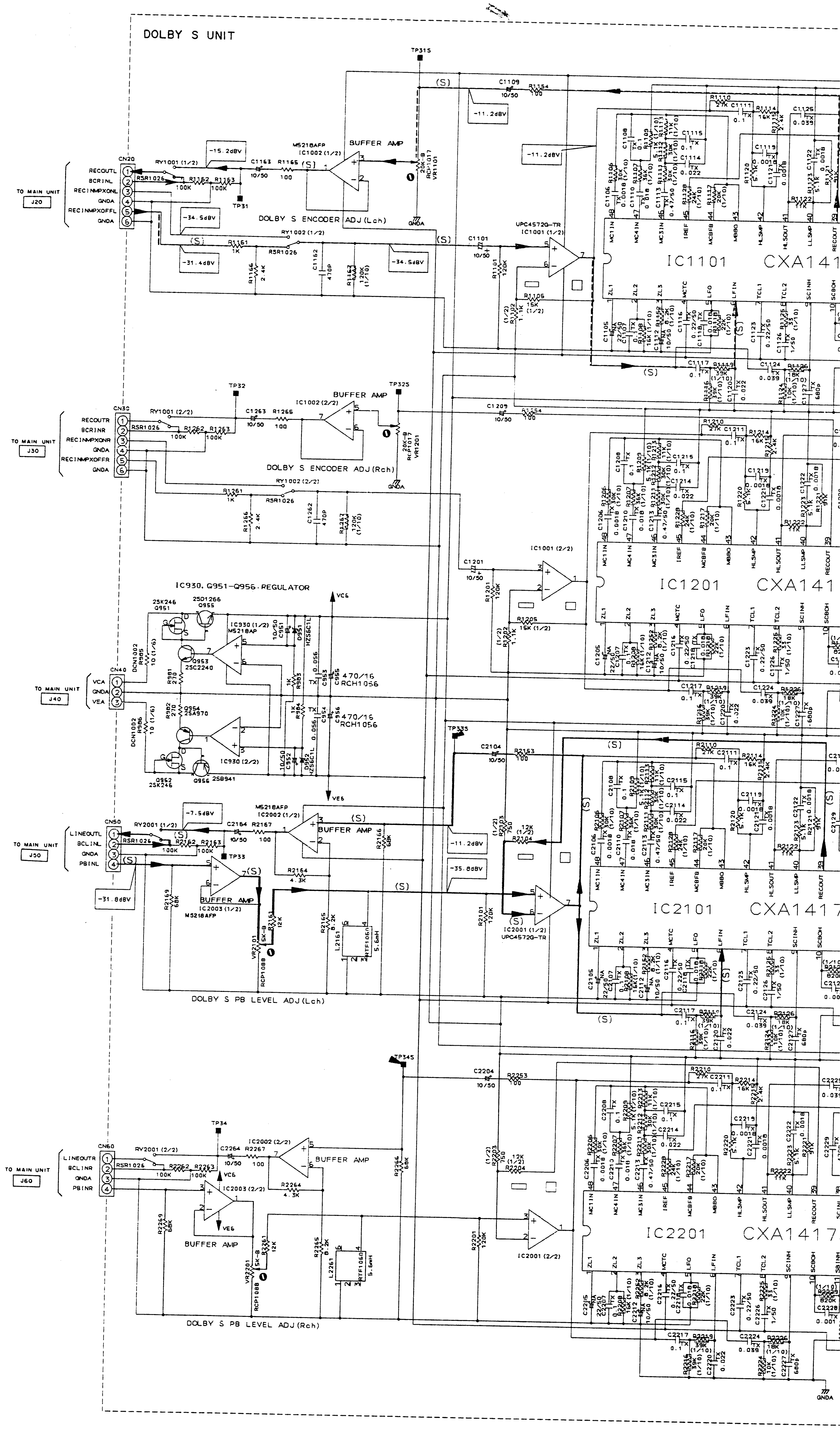

P.B HEAD
MECHA UNIT (1/3)
PB LEVEL ADJ.
TP21
TP22
CN11
IC101 (1/2) M5220P
IC101 (2/2)
Q101,Q102, IC101:PB EQ AMP
Q103,Q104:PB EQ SELECT
IC201:DOLBY B/C NR
IC201 CX20188
L103
L104
RTF1066
BCLINL
BCLINR
Q601, 602:PB MUTE
LINEOUTL
LINEOUTR
BY601
VCA
JA21 (1/2)
JA21 (2/2)
Q603, Q604:LINE MUTE
Q606:SOURCE/TAPE SELECT RELAY DRIVER
HEADPHONE UNIT
CN81
J81
VEA
MIX
RECOUTL
RECOUTR
MPX COIL
F301
F302
IC152 MPX AMP
IC152 (1/2)
IC152 (2/2)
IC301 CX20188
IC301:REC DOLBY B/C NR
IC401 (1/2) VCA
IC401 (2/2) VEA
IC402 (1/2)
IC402 (2/2)
EQ
GNDA
IC401, IC402, Q401-Q408, Q419-Q428, Q433-Q442, Q455, Q456, Q459-Q462, Q471-Q479 :REC EQ AMP
RKB1020
JA12 (1/2)
JA12 (2/2)
OPERATION UNIT (2/2)
VR UNIT
KPC5
J42
CN42
15KHz LEVEL ADJ.
400Hz LEVEL ADJ.
400Hz LPF AMP
3kHz LEVEL ADJ.
IC351 (1/2)
IC351 (2/2)
VEA 10kHz BUFFER AMP
MPX OFF–ON
S381
KU/CA ONLY
SR
JA41
JA42
CD SYNC
JA31
MAIN UNIT
CONTROL UNIT
IC831 BA6109
IC831, Q833–Q835 :REEL MOTOR DRIVE
IC861 BA6109
IC861, Q861–Q864 :ASSIST MOTOR DRIVE
IC801:SYSTEM CONTROL
RESET
PLAY 2.1V
FF 7.8V
KU/CA
CN91
RKC-061
RWZ2259
CN92
RKC-054
POWER SW UNIT
KU/CA AC120V 60Hz
LIVE
HEM
RWZ2258
RKC-055
AC220–230/230–240V 50/60Hz
CN21
CN22
IC701, IC702, Q701, Q702 : REGULATOR
Q751 Q754 : POWER OFF&RESET
IC731, IC732, Q741 : REGULATOR
AC 5.3V
VFL
POFF
XRST
AC1
AC2
TEPE SELECTOR UNIT
CONNECTION UNIT RWM1233
ENCODER
DOOR SW UNIT
C.M
R.M
A.M
J4A
J4
CN9
J3
J2
J8A
J8
S1
S2
S4

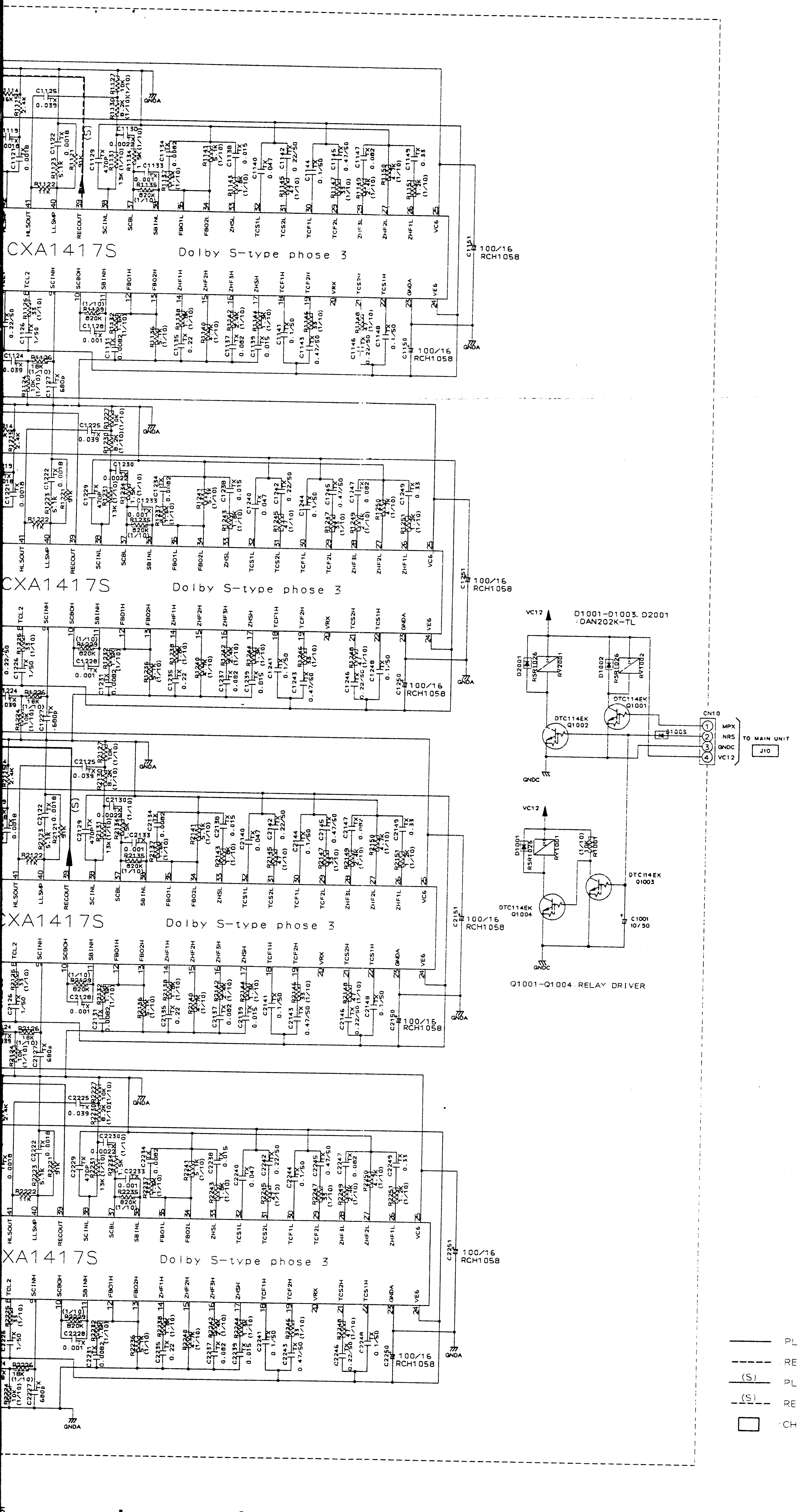
✱ PARTS	KU/ CA	HEM
FU701, FU702	800mA / 125A REK-079	T500mA / 250V REK-097
FU703, FU704	1.6A / 125V REK-074	T2A / 250V REK-103

CT-41/KU/CA, CT-900S/HEM


MECHA UNIT (3/3) RYM1108
ENCODER
DOOR SW UNIT
REC SW UNIT
SENSOR UNIT (A)
CONNECTOR UNIT
IC801 SYSTEM CONTROL
IC801 PD4290C
RESET
TO OPERATION UNIT
J72
KU/CA 11Pin
HEM 10Pin
J72A
J73A
J74A
J75A
J73
J74
J75
J58A
J58
Q803 PB MUTE SW
Q805 SOURCE/TAPE SELECT SW
Q802 REC MUTE SW
Q801 LINE MUTE SW
IC871, IC872, Q871-Q874 : SIGNAL LEVEL DETECTOR
J51
J52
J53
J57
CN51
CN52
CN53
CN57
IC402 (2/2)
IC402 (1/2)
HEQ1
HEQ0
HEADPHONE UNIT
HEADPHONE AMP
IC901 (1/2)
IC901 (2/2)
JA51
J901
MUSIC SEARCH
IC251
IC281 (1/2)
IC281 (2/2)
METER AMP
MIX
SONG
XBLE
LML
LMR
MRST
VCA
VEA
Q503-Q505 : NOR, C/O2, MET BIAS ADJ
C/C ADJ.
MET ADJ.
Q506 BIAS ADJ AMP
Q512 BIAS OSC SW
105kHz OSC
BIAS FREQ. ADJ.
Q551, Q552 : REC BIAS ON/OFF
Q555, Q556 : HX-PRO ON/OFF
HX-PRO
IC551
TP11
CN12
MECHA UNIT (2/3)
ERASE HEAD
L REC HEAD R
J101
J102
J103
J104
J201
J202
J203
J205
J206
J301
J302
J303
J305
J306
J401
J403
J501
J502
J504
J601
J602
J604
J10
J20
J30
J40
J50
J60
TO DOLBY S UNIT CN10
TO DOLBY S UNIT CN20
TO DOLBY S UNIT CN30
TO DOLBY S UNIT CN40
TO DOLBY S UNIT CN50
TO DOLBY S UNIT CN60

: PLAYBACK SIGNAL (DOLBY B/C/S or OFF)
: RECORDING SIGNAL (DOLBY B/C/S or OFF)
(S) : PLAYBACK SIGNAL (DOLBY S)
(S) : RECORDING SIGNAL (DOLBY S)


DOLBY S UNIT
TO MAIN UNIT J20
CN20
RECOUTL
BCRINL
RECINMPXONL
GNDA
RECINMPXOFFL
GNDA
RY1001 (1/2)
RSR1026
R1162 100K
R1163 100K
TP31
-15.2dBV
-34.5dBV
-31.4dBV
C1163 10/50
R1165 100
M5218AFP IC1002 (1/2)
BUFFER AMP
20K-B RCP1017 VR1101
TP315
DOLBY S ENCODER ADJ (Lch)
RY1002 (1/2)
R1161 1K
R1166 2.4K
C1162 470P
R1167 120K (1/10)
C1109 10/50
R1154 100
-11.2dBV
C1101 10/50
R1101 120K
UPC4572G-TR IC1001 (1/2)
R1102 1.1K (1/2)
R1105 15K (1/2)
IC1101 CXA1417
TO MAIN UNIT J30
CN30
RECOUTR
BCRINR
RECINMPXONR
GNDA
RECINMPXOFFR
GNDA
RY1001 (2/2)
TP32
C1263 10/50
R1265 100
IC1002 (2/2)
BUFFER AMP
TP325
20K-B RCP1017 VR1201
DOLBY S ENCODER ADJ (Rch)
RY1002 (2/2)
R1261 1K
R1266 2.4K
C1262 470P
R1267 120K (1/10)
C1209 10/50
R1254 100
C1201 10/50
R1201 120K
IC1001 (2/2)
R1202 1.1K (1/2)
R1205 15K (1/2)
IC1201 CXA141
IC930, Q951-Q956 REGULATOR
2SK246 Q951
2SD1266 Q955
IC930 (1/2) M5218AP
Q953 2SC2240
Q954 2SA970
IC930 (2/2)
Q952 2SK246
Q956 2SB941
DCN1002 R985 10 (1/6)
DCN1002 R986 10 (1/6)
R981 270
R982 270
R983 1K
R984 1K
C951 10/50
C952 10/50
D951 HZS6C1L
D952 HZS6C1L
C953 0.056
C954 0.056
C955 470/16 RCH1056
C956 470/16 RCH1056
VC6
VE6
TO MAIN UNIT J40
CN40
VCA
GNDA
VEA
TP335
C2104 10/50
R2153 100
TO MAIN UNIT J50
CN50
LINEOUTL
BCLINL
GNDA
PBINL
RY2001 (1/2)
-7.5dBV
-31.8dBV
-11.2dBV
-35.8dBV
C2164 10/50
R2167 100
M5218AFP IC2002 (1/2)
BUFFER AMP
R2162 100K
R2163 100K
TP33
R2169 68K
IC2003 (1/2) M5218AFP
R2164 4.3K
R2166 68K
R2161 12K
VR2101 5K-B RCP1088
R2165 8.2K
L2161 RTF1060 5.6mH
DOLBY S PB LEVEL ADJ (Lch)
R2101 120K
R2103 750 (1/2)
R2104 12K (1/2)
IC2001 (1/2) UPC4572G-TR
IC2101 CXA1417
TP345
C2204 10/50
R2253 100
TO MAIN UNIT J60
CN60
LINEOUTR
BCLINR
GNDA
PBINR
RY2001 (2/2)
TP34
C2264 10/50
R2267 100
IC2002 (2/2)
BUFFER AMP
R2262 100K
R2263 100K
IC2003 (2/2)
R2269 68K
R2264 4.3K
R2266 68K
R2261 12K
VR2201 5K-B RCP1088
R2265 8.2K
L2261 RTF1060 5.6mH
DOLBY S PB LEVEL ADJ (Rch)
R2201 120K
R2203 750 (1/2)
R2204 12K (1/2)
IC2001 (2/2)
IC2201 CXA1417
ZL1
ZL2
ZL3
MCTC
LFO
LFIN
TCL1
TCL2
SCINH
SCBOH
SBINH
MC1IN
MC4IN
MC3IN
IREF
MCBFB
MBBO
HLSMP
HLSOUT
LLSMP
RECOUT
(S)
GNDA
A
B
C
D
E
1
2
3
4
5
8


CXA1417S
Dolby S-type phose 3
CXA1417S
Dolby S-type phose 3
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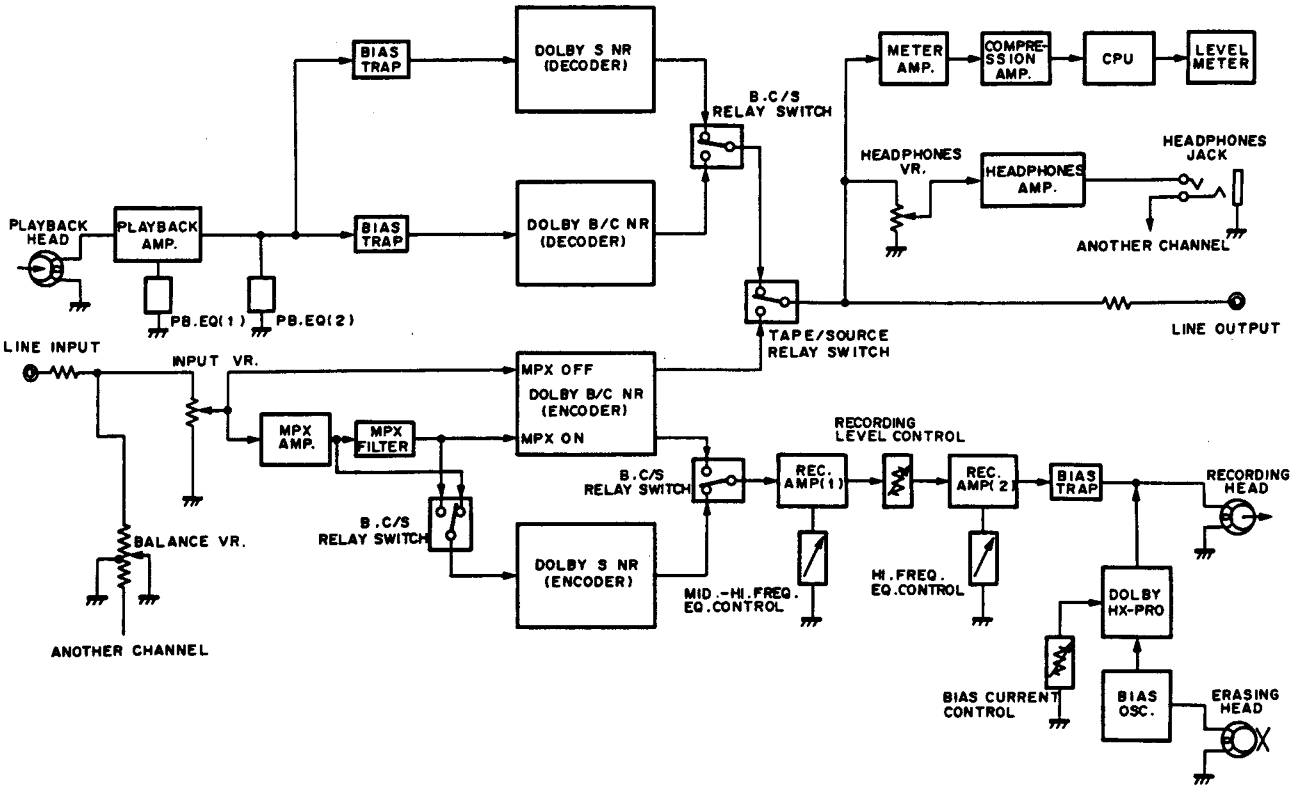
Dolby S-type phose 3
HLSOUT
LLSMP
RECOUT
SCINL
SCBL
SBINL
FBO1L
FBO2L
ZHSL
TCS1L
TCS2L
TCF1L
TCF2L
ZHF3L
ZHF2L
ZHF1L
VC6
TCL2
SCINH
SCBOH
SBINH
FBO1H
FBO2H
ZHF1H
ZHF2H
ZHF3H
ZHSH
TCF1H
TCF2H
VRX
TCS2H
TCS1H
GNDA
VE6
(S)
C1151 100/16 RCH1058
C1150 100/16 RCH1058
C1251 100/16 RCH1058
C1250 100/16 RCH1058
C2151 100/16 RCH1058
C2150 100/16 RCH1058
C2251 100/16 RCH1058
C2250 100/16 RCH1058
GNDA
VC12
D1001–D1003, D2001
:DAN202K-TL
D2001
R5R1026
RY2001
D1002
R5R1026
RY1002
DTC114EK
Q1002
DTC114EK
Q1001
D1003
CN10
MPX
NRS
GNDC
VC12
TO MAIN UNIT
J10
GNDC
VC12
D1001
R5R1026
RY1001
(1/10)
10K
R1001
DTC114EK
Q1003
DTC114EK
Q1004
C1001
10/50
GNDC
Q1001–Q1004 RELAY DRIVER

———	PLYBACK SIGNAL (DOLBY B/C or OFF)
------	RECORDING SIGNAL (DOLBY B/C or OFF)
—(S)—	PLYBACK SIGNAL (DOLBY S)
--(S)--	RECORDING SIGNAL (DOLBY S)
☐	CHIP PARTS

4. BLOCK DIAGRAM


BIAS TRAP
DOLBY S NR (DECODER)
B.C/S RELAY SWITCH
METER AMP.
COMPRESSION AMP.
CPU
LEVEL METER
HEADPHONES VR.
HEADPHONES AMP.
HEADPHONES JACK
ANOTHER CHANNEL
PLAYBACK HEAD
PLAYBACK AMP.
BIAS TRAP
DOLBY B/C NR (DECODER)
PB.EQ(1)
PB.EQ(2)
LINE OUTPUT
TAPE/SOURCE RELAY SWITCH
LINE INPUT
INPUT VR.
MPX OFF
DOLBY B/C NR (ENCODER)
MPX ON
MPX AMP.
MPX FILTER
RECORDING LEVEL CONTROL
B.C/S RELAY SWITCH
REC. AMP(1)
REC. AMP(2)
BIAS TRAP
RECORDING HEAD
B.C/S RELAY SWITCH
BALANCE VR.
DOLBY S NR (ENCODER)
MID.-HI.FREQ. EQ.CONTROL
HI.FREQ. EQ.CONTROL
DOLBY HX-PRO
ANOTHER CHANNEL
BIAS CURRENT CONTROL
BIAS OSC.
ERASING HEAD

5. P.C.B's PARTS LIST

NOTES:

- Parts without part number cannot be supplied.
- Parts marked by “⊙” are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%)

560 Ω → 56 × 10^1 → 561 ································ RD1/4PS $\boxed{5}\boxed{6}\boxed{1}$ J
47k Ω → 47 × 10^3 → 473 ································ RD1/4PS $\boxed{4}\boxed{7}\boxed{3}$ J
0.5 Ω → 0R5 ·· RN2H $\boxed{0}\boxed{R}\boxed{5}$ K
1 Ω → 010 ·· RS1P $\boxed{0}\boxed{1}\boxed{0}$ K

Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).

5.62k Ω → 562 × 10^1 → 5621 ································ RN1/4SR $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ F

DOLBY S UNIT

This unit is the exclusive board for CT-41/KU/CA and CT-900S/HEM types.

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC930	OP-AMP, IC	M5218AP
	IC1001		UPC4572G
	IC1002	OP-AMP, IC	M5218AFP
	IC1101		CXA1417S
	IC1201		CXA1417S
	IC2001		UPC4572G
	IC2002, 2003	OP-AMP, IC	M5218AFP
	IC2101		CXA1417S
	IC2201		CXA1417S
⚠	Q951, 952	N-FET	2SK246
	Q953	TRANSISTOR	2SC2240
	Q954	TRANSISTOR	2SA970
⚠	Q955	TRANSISTOR	2SD1266
⚠	Q956	TRANSISTOR	2SB941
	Q1001-1004		DTC114EK
	D951, 952	ZENER DIODE	HZS6C1L
	D1001-1003	CHIP CIODE ARRAY	DAN202K
	D2001	CHIP CIODE ARRAY	DAN202K

RELAYS

Mark	No.	Description	Part No.
	RY1001, 1002		RSR1026
	RY2001		RSR1026

COILS/TRANSFORMERS

Mark	No.	Description	Part No.
	L2161	COIL	RTF1060
	L2261	COIL	RTF1060

CAPACITORS

Mark	No.	Description	Part No.
	C951, 952	ELECTR. CAPACITOR(10/50)	RCH1062
	C953, 954	AUDIO FILM CAPACITOR	CFTXA563J50
	C955, 956	ELECTR. CAPACITOR(470/16)	RCH1056
	C1001	ELECTR. CAPACITOR	CEAS100M50
	C1101	ELECTR. CAPACITOR(10/50)	RCH1062
	C1105	ELECTR. CAPACITOR	CENA220M50
	C1106	AUDIO FILM CAPACITOR	CFTXA182J50
	C1107, 1108	AUDIO FILM CAPACITOR	CFTXA104J50
	C1109	ELECTR. CAPACITOR(10/50)	RCH1062
	C1110	AUDIO FILM CAPACITOR	CFTXA183J50
	C1111	AUDIO FILM CAPACITOR	CFTXA104J50
	C1112	ELECTR. CAPACITOR	CENA100M50
	C1113	AUDIO FILM CAPACITOR	CFTXA474J50
	C1114	AUDIO FILM CAPACITOR	CFTXA223J50
	C1115	AUDIO FILM CAPACITOR	CFTXA104J50
	C1116	AUDIO FILM CAPACITOR	CFTXA224J50
	C1117	AUDIO FILM CAPACITOR	CFTXA104J50
	C1118	AUDIO FILM CAPACITOR	CFTXA183J50
	C1119	AUDIO FILM CAPACITOR	CFTXA182J50
	C1120	AUDIO FILM CAPACITOR	CFTXA223J50
	C1121, 1122	AUDIO FILM CAPACITOR	CFTXA182J50
	C1123	AUDIO FILM CAPACITOR	CFTXA224J50
	C1124, 1125	AUDIO FILM CAPACITOR	CFTXA393J50
	C1126	AUDIO FILM CAPACITOR	CFTXA105J50
	C1127		CFTXA681J50
	C1128		CFTXA102J50
	C1129		CFTXA471J50
	C1130	AUDIO FILM CAPACITOR	CFTXA222J50
	C1131	AUDIO FILM CAPACITOR	CFTXA822J50
	C1133		CFTXA102J50
	C1134	AUDIO FILM CAPACITOR	CFTXA822J50
	C1135	AUDIO FILM CAPACITOR	CFTXA224J50
	C1137	AUDIO FILM CAPACITOR	CFTXA823J50
	C1138, 1139	AUDIO FILM CAPACITOR	CFTXA153J50
	C1140	AUDIO FILM CAPACITOR	CFTXA473J50
	C1141	AUDIO FILM CAPACITOR	CFTXA104J50
	C1142	AUDIO FILM CAPACITOR	CFTXA224J50
	C1143	AUDIO FILM CAPACITOR	CFTXA474J50
	C1144	AUDIO FILM CAPACITOR	CFTXA104J50
	C1145	AUDIO FILM CAPACITOR	CFTXA474J50
	C1146	AUDIO FILM CAPACITOR	CFTXA224J50
	C1147	AUDIO FILM CAPACITOR	CFTXA823J50
	C1148	AUDIO FILM CAPACITOR	CFTXA104J50
	C1149	AUDIO FILM CAPADITOR	CFTXA334J50
	C1150, 1151	ELECTR. CAPACITOR(100/16)	RCH1058

Mark	No.	Description	Part No.
	C1162		CFTXA471J50
	C1163	ELECTR. CAPACITOR(10/50)	RCH1062
	C1201	ELECTR. CAPACITOR(10/50)	RCH1062
	C1205	ELECTR. CAPACITOR	CENA220M50
	C1206	AUDIO FILM CAPACITOR	CFTXA182J50
	C1207, 1208	AUDIO FILM CAPACITOR	CFTXA104J50
	C1209	ELECTR. CAPACITOR(10/50)	RCH1062
	C1210	AUDIO FILM CAPACITOR	CFTXA183J50
	C1211	AUDIO FILM CAPACITOR	CFTXA104J50
	C1212	ELECTR. CAPACITOR	CENA100M50
	C1213	AUDIO FILM CAPACITOR	CFTXA474J50
	C1214	AUDIO FILM CAPACITOR	CFTXA223J50
	C1215	AUDIO FILM CAPACITOR	CFTXA104J50
	C1216	AUDIO FILM CAPACITOR	CFTXA224J50
	C1217	AUDIO FILM CAPACITOR	CFTXA104J50
	C1218	AUDIO FILM CAPACITOR	CFTXA183J50
	C1219	AUDIO FILM CAPACITOR	CFTXA182J50
	C1220	AUDIO FILM CAPACITOR	CFTXA223J50
	C1221, 1222	AUDIO FILM CAPACITOR	CFTXA182J50
	C1223	AUDIO FILM CAPACITOR	CFTXA224J50
	C1224, 1225	AUDIO FILM CAPACITOR	CFTXA393J50
	C1226	AUDIO FILM CAPACITOR	CFTXA105J50
	C1227		CFTXA681J50
	C1228		CFTXA102J50
	C1229		CFTXA471J50
	C1230	AUDIO FILM CAPACITOR	CFTXA222J50
	C1231	AUDIO FILM CAPACITOR	CFTXA822J50
	C1233		CFTXA102J50
	C1234	AUDIO FILM CAPACITOR	CFTXA822J50
	C1235	AUDIO FILM CAPACITOR	CFTXA224J50
	C1237	AUDIO FILM CAPACITOR	CFTXA823J50
	C1238, 1239	AUDIO FILM CAPACITOR	CFTXA153J50
	C1240	AUDIO FILM CAPACITOR	CFTXA473J50
	C1241	AUDIO FILM CAPACITOR	CFTXA104J50
	C1242	AUDIO FILM CAPACITOR	CFTXA224J50
	C1243	AUDIO FILM CAPACITOR	CFTXA474J50
	C1244	AUDIO FILM CAPACITOR	CFTXA104J50
	C1245	AUDIO FILM CAPACITOR	CFTXA474J50
	C1246	AUDIO FILM CAPACITOR	CFTXA224J50
	C1247	AUDIO FILM CAPACITOR	CFTXA823J50
	C1248	AUDIO FILM CAPACITOR	CFTXA104J50
	C1249	AUDIO FILM CAPADITOR	CFTXA334J50
	C1250, 1251	ELECTR. CAPACITOR(100/16)	RCH1058
	C1262		CFTXA471J50
	C1263	ELECTR. CAPACITOR(10/50)	RCH1062
	C2104	ELECTR. CAPACITOR(10/50)	RCH1062
	C2105	ELECTR. CAPACITOR	CENA220M50
	C2106	AUDIO FILM CAPACITOR	CFTXA182J50
	C2107, 2108	AUDIO FILM CAPACITOR	CFTXA104J50
	C2110	AUDIO FILM CAPACITOR	CFTXA183J50
	C2111	AUDIO FILM CAPACITOR	CFTXA104J50
	C2112	ELECTR. CAPACITOR	CENA100M50
	C2113	AUDIO FILM CAPACITOR	CFTXA474J50
	C2114	AUDIO FILM CAPACITOR	CFTXA223J50
	C2115	AUDIO FILM CAPACITOR	CFTXA104J50
	C2116	AUDIO FILM CAPACITOR	CFTXA224J50
	C2117	AUDIO FILM CAPACITOR	CFTXA104J50
	C2118	AUDIO FILM CAPACITOR	CFTXA183J50
	C2119	AUDIO FILM CAPACITOR	CFTXA182J50
	C2120	AUDIO FILM CAPACITOR	CFTXA223J50
	C2121, 2122	AUDIO FILM CAPACITOR	CFTXA182J50
	C2123	AUDIO FILM CAPACITOR	CFTXA224J50
	C2124, 2125	AUDIO FILM CAPACITOR	CFTXA393J50
	C2126	AUDIO FILM CAPACITOR	CFTXA105J50
	C2127		CFTXA681J50
	C2128		CFTXA102J50
	C2129		CFTXA471J50
	C2130	AUDIO FILM CAPACITOR	CFTXA222J50
	C2131	AUDIO FILM CAPACITOR	CFTXA822J50
	C2133		CFTXA102J50
	C2134	AUDIO FILM CAPACITOR	CFTXA822J50
	C2135	AUDIO FILM CAPACITOR	CFTXA224J50
	C2137	AUDIO FILM CAPACITOR	CFTXA823J50
	C2138, 2139	AUDIO FILM CAPACITOR	CFTXA153J50
	C2140	AUDIO FILM CAPACITOR	CFTXA473J50
	C2141	AUDIO FILM CAPACITOR	CFTXA104J50
	C2142	AUDIO FILM CAPACITOR	CFTXA224J50
	C2143	AUDIO FILM CAPACITOR	CFTXA474J50
	C2144	AUDIO FILM CAPACITOR	CFTXA104J50
	C2145	AUDIO FILM CAPACITOR	CFTXA474J50
	C2146	AUDIO FILM CAPACITOR	CFTXA224J50
	C2147	AUDIO FILM CAPACITOR	CFTXA823J50
	C2148	AUDIO FILM CAPACITOR	CFTXA104J50
	C2149	AUDIO FILM CAPADITOR	CFTXA334J50
	C2150, 2151	ELECTR. CAPACITOR(100/16)	RCH1058
	C2164	ELECTR. CAPACITOR(10/50)	RCH1062
	C2204	ELECTR. CAPACITOR(10/50)	RCH1062
	C2205	ELECTR. CAPACITOR	CENA220M50
	C2206	AUDIO FILM CAPACITOR	CFTXA182J50
	C2207, 2208	AUDIO FILM CAPACITOR	CFTXA104J50
	C2210	AUDIO FILM CAPACITOR	CFTXA183J50
	C2211	AUDIO FILM CAPACITOR	CFTXA104J50
	C2212	ELECTR. CAPACITOR	CENA100M50
	C2213	AUDIO FILM CAPACITOR	CFTXA474J50
	C2214	AUDIO FILM CAPACITOR	CFTXA223J50
	C2215	AUDIO FILM CAPACITOR	CFTXA104J50
	C2216	AUDIO FILM CAPACITOR	CFTXA224J50
	C2217	AUDIO FILM CAPACITOR	CFTXA104J50
	C2218	AUDIO FILM CAPACITOR	CFTXA183J50
	C2219	AUDIO FILM CAPACITOR	CFTXA182J50
	C2220	AUDIO FILM CAPACITOR	CFTXA223J50
	C2221, 2222	AUDIO FILM CAPACITOR	CFTXA182J50
	C2223	AUDIO FILM CAPACITOR	CFTXA224J50
	C2224, 2225	AUDIO FILM CAPACITOR	CFTXA393J50
	C2226	AUDIO FILM CAPACITOR	CFTXA105J50
	C2227		CFTXA681J50
	C2228		CFTXA102J50
	C2229		CFTXA471J50
	C2230	AUDIO FILM CAPACITOR	CFTXA222J50
	C2231	AUDIO FILM CAPACITOR	CFTXA822J50

Mark	No.	Description	Part No.
	C2233		CFTXA102J50
	C2234	AUDIO FILM CAPACITOR	CFTXA822J50
	C2235	AUDIO FILM CAPACITOR	CFTXA224J50
	C2237	AUDIO FILM CAPACITOR	CFTXA823J50
	C2238,2239	AUDIO FILM CAPACITOR	CFTXA153J50
	C2240	AUDIO FILM CAPACITOR	CFTXA473J50
	C2241	AUDIO FILM CAPACITOR	CFTXA104J50
	C2242	AUDIO FILM CAPACITOR	CFTXA224J50
	C2243	AUDIO FILM CAPACITOR	CFTXA474J50
	C2244	AUDIO FILM CAPACITOR	CFTXA104J50
	C2245	AUDIO FILM CAPACITOR	CFTXA474J50
	C2246	AUDIO FILM CAPACITOR	CFTXA224J50
	C2247	AUDIO FILM CAPACITOR	CFTXA823J50
	C2248	AUDIO FILM CAPACITOR	CFTXA104J50
	C2249	AUDIO FILM CAPADITOR	CFTXA334J50
	C2250,2251	ELECTR.CAPACITOR(100/16)	RCH1058
	C2264	ELECTR.CAPACITOR(10/50)	RCH1062

RESISTORS

Mark	No.	Description	Part No.
	R981-984	CARBONFILM RESISTOR	RDR1/4PM□□□J
⚠	R985,986	FUSE RESISTOR(10Ω)	DCN1002
	R1001	CHIP RESISTOR	RS1/10S□□□J
	R1101	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1102	CARBONFILM RESISTOR	RDR1/2PM□□□J
	R1105	CARBONFILM RESISTOR	RDR1/2PM□□□J
	R1106-1109		RS1/10S□□□J
	R1110	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1111-1113		RS1/10S□□□J
	R1114,1115	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1116-1119	CHIP RESISTOR	RS1/10S□□□J
	R1120-1123	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1124-1132	CHIP RESISTOR	RS1/10S□□□J
	R1134-1138	CHIP RESISTOR	RS1/10S□□□J
	R1140-1152	CHIP RESISTOR	RS1/10S□□□J
	R1154	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1161-1163	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1165,1166	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1167	CHIP RESISTOR	RS1/10S□□□J
	R1201	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1202	CARBONFILM RESISTOR	RDR1/2PM□□□J
	R1205	CARBONFILM RESISTOR	RDR1/2PM□□□J
	R1206-1209		RS1/10S□□□J
	R1210	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1211-1213		RS1/10S□□□J
	R1214,1215	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1216-1219	CHIP RESISTOR	RS1/10S□□□J
	R1220-1223	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1224-1232	CHIP RESISTOR	RS1/10S□□□J
	R1234-1238	CHIP RESISTOR	RS1/10S□□□J
	R1240-1252	CHIP RESISTOR	RS1/10S□□□J
	R1254	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1261-1263	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1265,1266	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R1267	CHIP RESISTOR	RS1/10S□□□J

Mark	No.	Description	Part No.
	R2101	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R2103,2104	CARBONFILM RESISTOR	RDR1/2PM□□□J
	R2106-2109		RS1/10S□□□J
	R2110	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R2111-2113		RS1/10S□□□J
	R2114,2115	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R2116-2119	CHIP RESISTOR	RS1/10S□□□J
	R2120-2123	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R2124-2132	CHIP RESISTOR	RS1/10S□□□J
	R2134-2138	CHIP RESISTOR	RS1/10S□□□J
	R2140-2152	CHIP RESISTOR	RS1/10S□□□J
	R2153	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R2161-2167	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R2169	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R2201	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R2203,2204	CARBONFILM RESISTOR	RDR1/2PM□□□J
	R2206-2209		RS1/10S□□□J
	R2210	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R2211-2213		RS1/10S□□□J
	R2214,2215	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R2216-2219	CHIP RESISTOR	RS1/10S□□□J
	R2220-2223	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R2224-2232	CHIP RESISTOR	RS1/10S□□□J
	R2234-2238	CHIP RESISTOR	RS1/10S□□□J
	R2240-2252	CHIP RESISTOR	RS1/10S□□□J
	R2253	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R2261-2267	CARBONFILM RESISTOR	RDR1/4PM□□□J
	R2269	CARBONFILM RESISTOR	RDR1/4PM□□□J
	VR1101	VARIABLE RESISTOR(20K)	RCP1017
	VR1201	VARIABLE RESISTOR(20K)	RCP1017
	VR2101	VARIABLE RESISTOR(5K)	RCP1088
	VR2201	VARIABLE RESISTOR(5K)	RCP1088

- *Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.*
- *"DOLBY", the double-D symbol ◻◻ and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.*

6. ADJUSTMENTS

PLAYBACK SECTION

Playback Level Adjustment

- This adjustment determines the DOLBY NR level, and must be performed with great care.

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	PLAY	Play the 315 Hz/0 dB section of the STD–331B test tape.	Deck	VR105 (Lch) VR106 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	–15.0 dBv	This adjustment must be performed accurately for proper Dolby level setting.
2.			DOLBY S	VR2101 (Lch) VR2201 (Rch)	TP. 33S (Lch) TP. 34S (Rch)	–11.7 dBv	

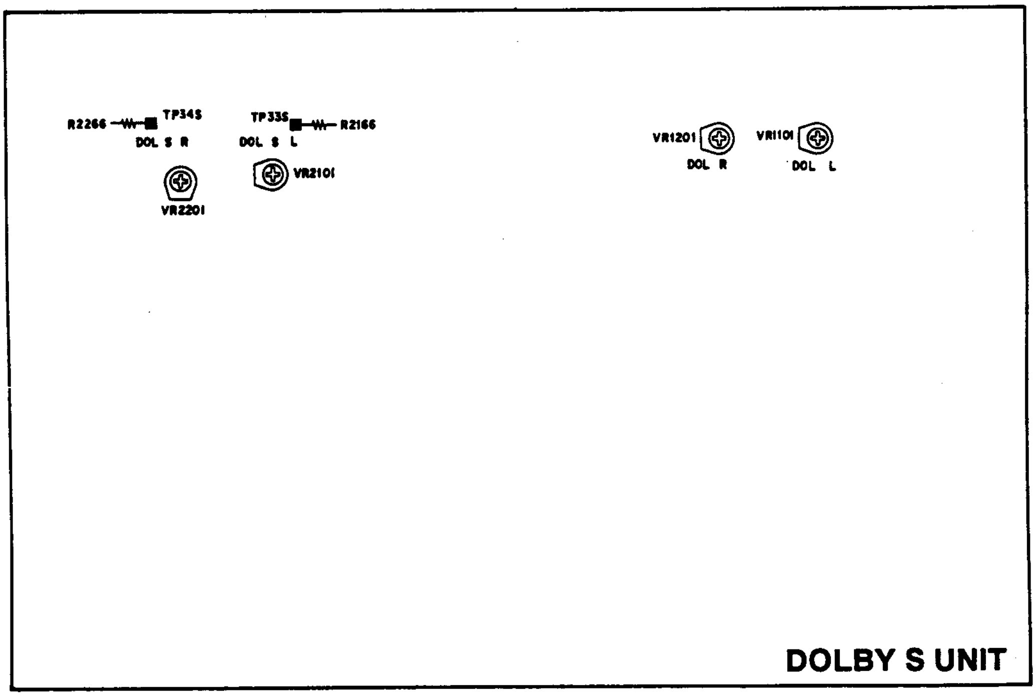


Fig. 6–1 Adjusting points

RECORDING SECTION

Bias Trap Adjustment

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC	Load the STD–610 test tape with no input signal.	Deck	L103 (Lch) L104 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	Minimum output	
2.	Set the Dolby NR switch to S.						
3.	REC	Load the STD–610 test tape with no input signal.	DOLBY S	L2161 (Lch) L2261 (Rch)	LINE OUT	Minimum output	

DOLBY S Encoder Adjustment

- DOLBY S encoder adjustment must be performed before recording bias adjustment.

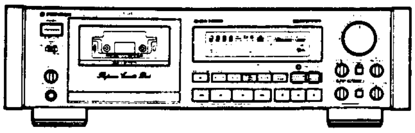
No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	Turn OFF the DOLBY NR switch.					
2.	REC/ PAUSE	Apply the 315 Hz/–10 dBv signal to the line input terminals.	REC level control volume	TP. 1 (Lch) TP. 2 (Rch)	–15.2 dBv	
3.	Turn the DOLBY NR switch to S position.					
4.	REC/ PAUSE	Apply the 315 Hz/–10 dBv signal to the line input terminals.	VR1101 (Lch) VR1201 (Rch)	TP. 1 (Lch) TP. 2 (Rch)	–14.5 dBv	

Recording Bias Adjustment

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC/ PAUSE	Apply a 315 Hz/–20 dBv (–20VU meter reading) signal to the line input terminals and insert STD–630.			LINE OUT		
2.	REC → PLAY	Record and play back the 315 Hz signal and a 10 kHz signal at –20 dBv input level.	NOR	VR551 (L) VR552 (R)		Record and play back repeatedly, comparing the 315 Hz and 10 kHz playback levels, and adjust to 0±0.5 dB.	
3.		Record the 10 kHz/315 Hz, –20 dBv signal on STD–620 and play back.	CrO2	VR501 (L/R)		0 dBv ± 1.0 dB	
4.		Record the 10 kHz/315 Hz, –20 dBv signal on STD–610 and play back.	METAL	VR502 (L/R)		0 dBv ± 1.0 dB	
5.	Check distortion value after adjustment is completed and confirm that there is no underbias.						
6.	Set the Dolby NR switch to S.						
7.	REC/ PAUSE	Apply a 315 Hz/–20 dBv (–20VU meter reading) signal to the line input terminals and insert STD–630.			LINE OUT		
8.	REC → PLAY	Record and play back the 315 Hz signal and a 10 kHz signal at –20 dBv input level.	NOR	VR551 (L) VR552 (R)		Record and play back repeatedly, comparing the 315 Hz and 10 kHz playback levels, and adjust to 0±1.0 dB.	
9.		Record the 10 kHz/315 Hz, –20 dBv signal on STD–620 and play back.	CrO2	VR501 (L/R)		0 dBv	If the L and R levels are not uniform, adjust them to an average value of 0 dB.
10.		Record the 10 kHz/315 Hz, –20 dBv signal on STD–610 and play back.	METAL	VR502 (L/R)		0 dBv	
11.	Check distortion value after adjustment is completed and confirm that there is no underbias.						

PIONEER
The Art of Entertainment

Service Manual



ORDER NO.
ARP2217

STEREO CASSETTE DECK
CT-777
CT-777-S

CT–777 AND CT–777–S HAVE THE FOLLOWING:

Type	Model		Power Requirement	Remarks
	CT–777	CT–777–S		
HEM	○	–	AC220V–230V, 230V–240V (switchable) *	
HEWM	–	○	AC220V–230V, 230V–240V (switchable) *	

* Change the primary wiring of the power transformer.

- **This manual is applicable to the CT–777/HEM and CT–777–S/HEWM types.**
- **As to the CT–777–S/HEWM type, refer to page 48.**
- **Ce manuel pour le service comprend les explications de réglage en francais.**
- **Este manual de servicio trata del método ajuste escrito en español.**

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1. EXPLODED VIEWS AND PARTS LIST

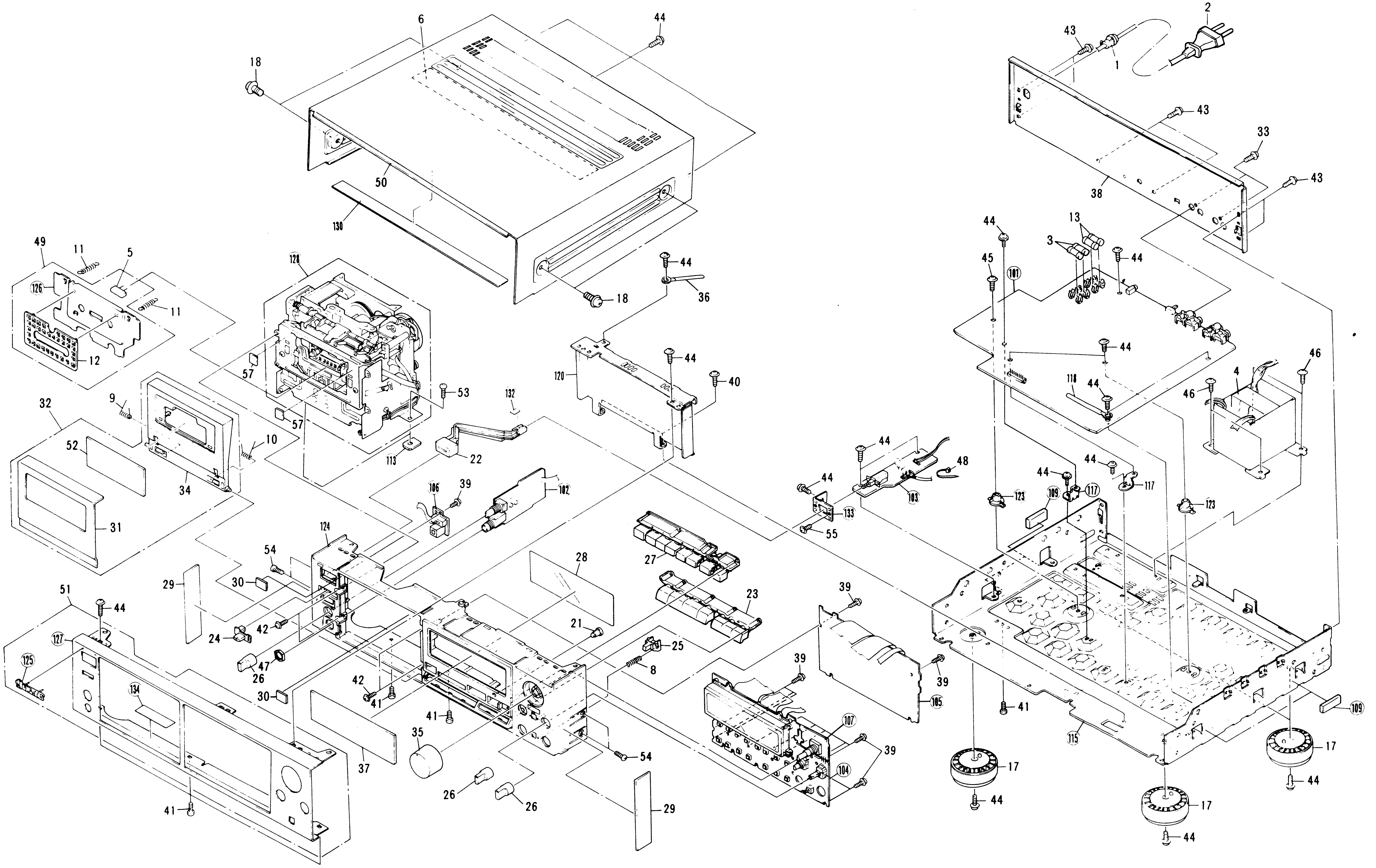
NOTES:

- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

1.1 PARTS LIST OF EXTERIOR

Mark	No.	Description	Part No.
⚠	1	Strain relief	CM－22B
⚠	2	AC power cord	PDG1003
⚠	3	FU703, FU704 Fuse(T2A)	REK－103
⚠	4	Power transformer (T1)	RTT1171
	5	LED (D3)	SLF－401C
	6	Absorber plate (B)	PNB1109
	7	……	
	8	Button spring	RBH1144
	9	Door spring (L)	RBH1222
	10	Door spring (R)	RBH1223
	11	Cassette plate spring	RBL－059
	12	Stabilizer B	REB1038
⚠	13	FU701, FU702 Audio fuse (T500mA)	REK－097
	14	……	
	15	……	
	16	……	
	17	Leg assembly	AMR1159
	18	Screw	FBT40P080FZK
	19	……	
	20	……	
	21	Counter reset knob	RAA1009
	22	Power button	RAC1410
	23	Function knob	RAC1411
	24	Slide SW knob	RAC1562
	25	Push knob	RAC1413
	26	Knob (B)	RAC1414
	27	Mode knob	RAC1552
	28	FL filter	RAH1542
	29	Side rubber	REB1094
	30	Door sheet	REB1138
	31	Door panel	RAH1844
	32	Door assembly	RXX1417
	33	Screw	BBZ30P100FCC
	34	Door	RNK1495
	35	VR knob assembly	RXA1281
	36	Cord clamper	RNH－184
	37	FL lens	RLP1027
	38	Rear panel	
	39	Screw	ABZ26P080FZK
	40	Screw	BBT30P060FCC
	41	Screw	BBT30P100FZK
	42	Screw	BBZ30P100FZK
	43	Screw	BBZ30P060FCC
	44	Screw	IBZ30P060FCC
	45	Screw	IBZ30P100FCC
	46	Screw	IBZ40P080FCC
	47	Jack nut	RBN－006
	48	Binder	REC－371
	49	Cassette plate assembly	RXX1064
	50	Bonnet	RXX1376
	51	Front panel assembly	RXX1385
	52	Door lens	RLP1026
	53	Screw	BBT30P080FCU
	54	Screw	BBZ30P080FZK
	55	Screw	PMA30P060FCU
	56	……	
	57	Door cushion	REB1117
	101	Main unit	
	102	Headphone unit	
	103	Power switch unit	
	104	Operation unit	
	105	Control unit	
	106	Timer switch unit	
	107	VR unit	
	108	……	
	109	Rubber spacer (A)	
	110	……	
	111	……	
	112	……	
	113	Mechanism sheet (2)	
	114	……	
	115	Main chassis	
	116	……	
	117	P.C.B base	
	118	Binder	
	119	……	
	120	FL shield plate	
	121	……	
	122	……	
	123	P.C.B stad	
	124	Panel stay	RNT1090
	125	Name plate	
	126	Cassette plate	
	127	Front panel	
	128	Mechanism unit	
	129	……	
	130	Protector 300 × 10	RED1020
	131	……	
	132	Acetate tape 10 × 10	
	133	PS holder	
	134	Acetate tape (K)	

Exterior



1.2 PARTS LIST OF MECHANISM SECTION

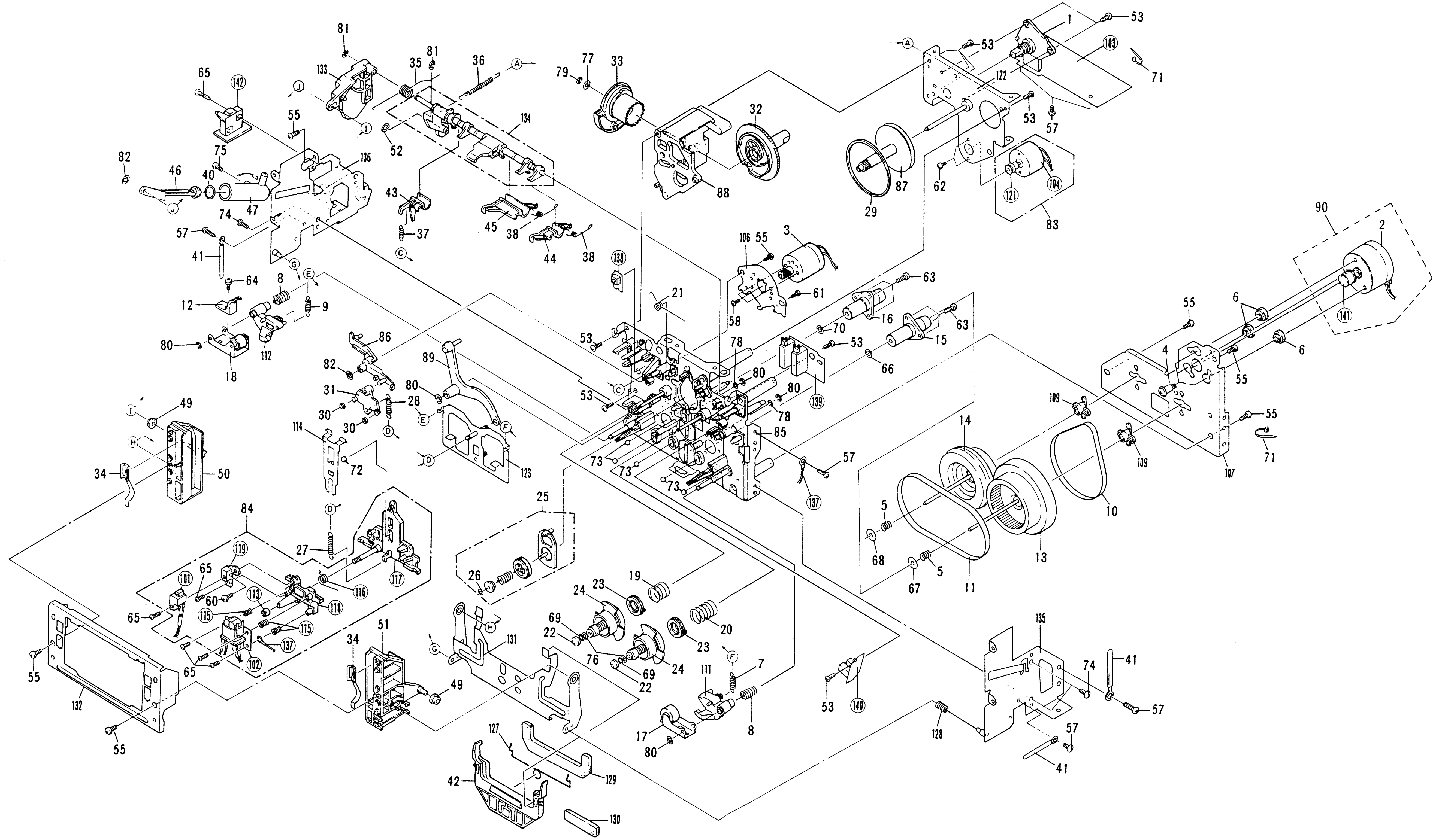
Mark	No.	Description	Part No.
	1	Rotary encoder	RSX1004
	2	Capstan motor	RXM1036
	3	Reel motor assembly	RXM1018
	4	Step screw	RBA – 064
	5	Thrust spring	RBL – 044
	6	Rubber cushion	REB1125
	7	Pinch spring	RBL – 028
	8	Pinch thrust spring	RBL – 030
	9	Sub – pinch spring	RBL – 098
	10	Capstan belt	REB1143
	11	Capstan belt (A)	REB – 509
	12	Tape guide	RNL – 016
	13	Flywheel assembly	RXA1374
	14	Sub – flywheel assembly	RXA1375
	15	Metal holder assembly(A)	RXA1342
	16	Metal holder assembly(B)	RXA1343
	17	Pinch roller arm (R) assembly	RXB – 876
	18	Pinch roller arm (A) assembly	RXB – 877
	19	BT spring (C)	RBH1213
	20	BT spring (B)	RBL – 032
	21	Idler pressure spring	RBL – 033
	22	Reel shaft cap (B)	RNK – 815
	23	BT disk assembly	RXB – 751
	24	Reel base assembly	RXB – 874
	25	Take – up idler assembly	RXB – 875
	26	Washer	RBF – 065
	27	Head base spring	RBL – 037
	28	Brake spring	RBL – 038
	29	Drive belt	REB1169
	30	Brake shoe	REB – 511
	31	Brake	RNL – 723
	32	Cam gear	RNK1640
	33	Side cam gear assembly	RXA1349
	34	Pocket spring (A)	RBL – 027
	35	Eject spring	RBL – 039
	36	Half set arm spring	RBL – 040
	37	REC functioning spring	RBL – 041
	38	Detection functioning spring	RBL – 042
	39	······	
	40	O ring	REB – 447
	41	Cord clamper	RNH – 184
	42	Cassette plate	RNK1498
	43	REC detector arm	RNL – 733
	44	Chrom detector arm	RNL – 734
	45	Metal detector arm	RNL – 735
	46	Piston	RNL – 739
	47	Cylinder	RNL – 740
	48	······	
	49	Collar	RNL – 742
	50	Pocket (L)	RNL – 849
	51	Pocket (R)	RNL – 850
	52	Washer	RBF – 057
	53	Screw	BBZ26P080FZK
	54	······	
	55	Screw	BBZ30P080FZK
	56	······	
	57	Screw	BCZ30P060FMC
	58	Screw	BMZ26P030FZK
	59	······	
	60	Screw	BMZ26P060FZK
	61	Screw	BMZ30P080FZK
	62	Screw	JGZ20P025FMC
	63	Screw	PMA26P050FZK
	64	Screw	PMA26P060FZK
	65	Screw	PMZ20P080FZK
	66	Washer	RBF – 030
	67	Thrust washer (A)	RBF – 069
	68	Thrust washer (B)	RBF – 070
	69	Washer	RBF – 076
	70	Washer	RBF1040
	71	Binder	REC – 371
	72	Steel ball (3mm)	REF – 022
	73	Steel ball (4mm)	REF – 023
	74	Screw	VCT30P060FZK
	75	Screw	VCZ26P080FMC
	76	Washer	WA21D040D013
	77	Washer	WA26N070W040
	78	Washer	WA32D080D050
	79	E ring	YE20FUC
	80	E ring	YE25FUC
	81	E ring	YE30FUC
	82	Snapring	YS24FBT
	83	Power motor assembly	RXX1055
	84	Head base assembly	RXX1333
	85	Mechanism chassis assembly	RXA1366
	86	Brake lever	RNK1638
	87	Second pulley assembly	RXA1350
	88	Gear base assembly	RXA1351
	89	Pinch lever assembly	RXA1360
	90	Capstan motor assembly	RXX1334
	101	E head	
	102	R & P head	
	103	Connector unit	
	104	Power motor	
	105	······	
	106	Reel motor mounting plate	RNE1169
	107	Flywheel holder	RNL – 304
	108	······	
	109	Thrust holder	RNL – 743
	110	······	
	111	Pressure arm (R)	RNL – 725
	112	Pressure arm (L)	RNL – 726
	113	Adjustment nut	
	114	Head base set spring	RBL – 026
	115	Head adjustment spring (C)	
	116	Hight spring	
	117	Head base	
	118	Sub – head base	
	119	E head base	
	120	······	
	121	First pulley	
	122	Gear chassis assembly	RXA1171
	123	Pinch base assembly	RXB – 878
	124	······	
	125	······	
	126	······	
	127	Cassette plate spring	RBH1227
	128	Position spring	RBL – 045
	129	Plate rubber (A)	REB1100
	130	Plate rubber (B)	REB1101
	131	Door arm	RNE1324
	132	Pocket frame	RNE1327
	133	Eject lever	RNL – 738
	134	Shift shaft assembly	RXB – 885
	135	Door frame (R) assembly	RXA1284
	136	Door frame (L) assembly	RXA1285
	136	Door frame	
	137	Earth lead assembly	
	138	REC switch unit	
	139	Tape selector unit	
	140	Sensor unit (A)	
	141	Motor pulley	
	142	Door switch unit	
	143	2.5mm pitch sidepost (5P)	BS5P – SHF

Mechanism Unit

2.

Part

Mark



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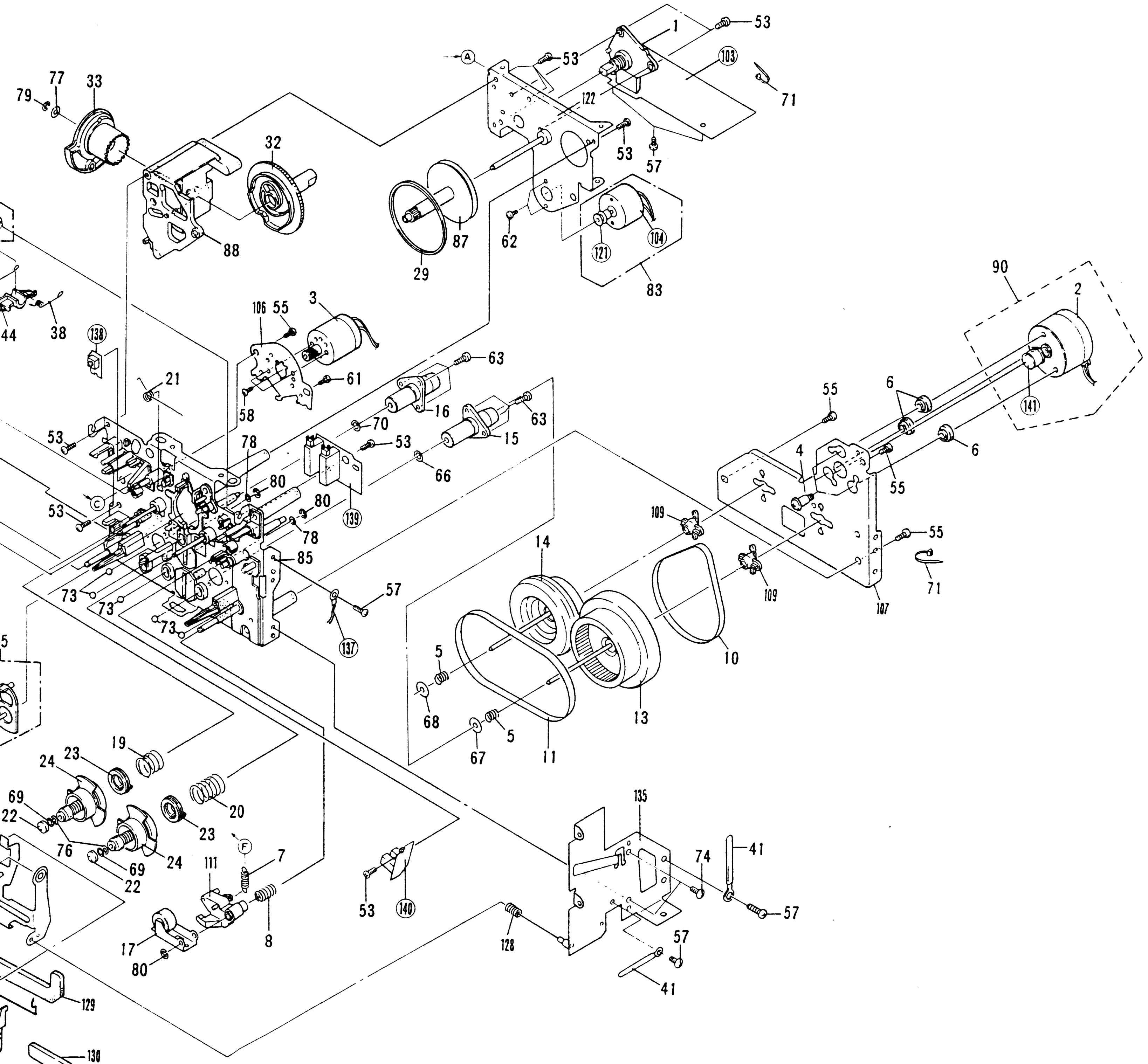
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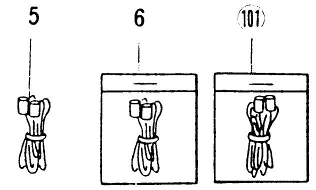
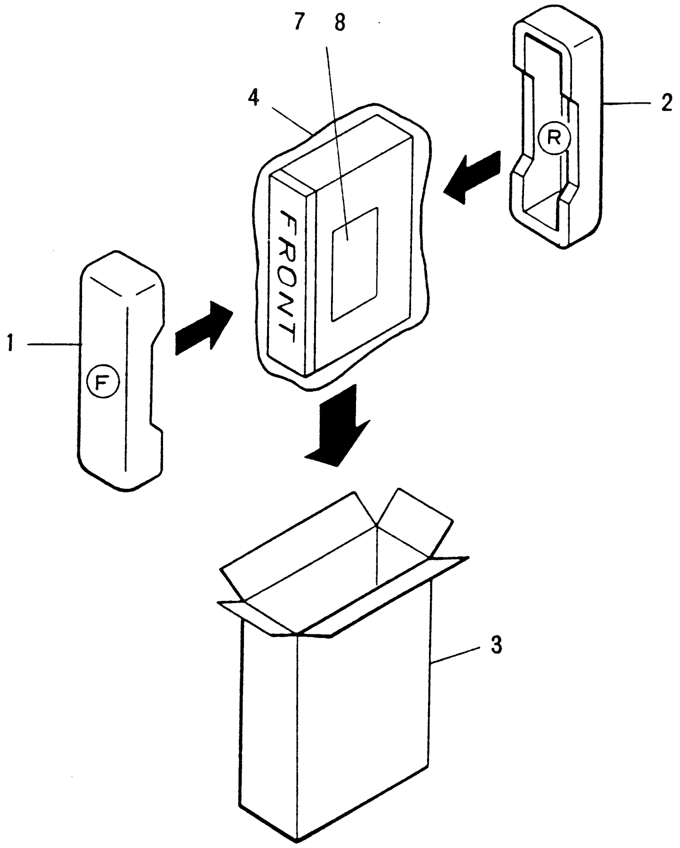
2. PACKING

Parts List

Mark	No.	Description	Part No.
	1	Pad (F)	RHA1021
	2	Pad (R)	RHA1022
	3	Packing case	RHG1279
	4	Sheet	RHX－034
	5	Control cord	RDE1030
	6	Connection cord	RDE1002
	7	Operating instructions (French, Italian, Dutch, Swedish, Spanish, Portuguese)	RRD1109
	8	Operating instructions (English, German)	RRE1044
	101	Connection cord assembly	

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1. RESISTORS :
   Indicated in Ω, 1／4W, 1／6W, ±5% tolerance unless otherwise noted k; kΩ, M; MΩ, (F); ±1%, (G); ±2%, (K); ±10%, (M); ±20% tolerance.

2. CAPACITORS :
   Indicated in capacity (μF)／voltage (V) unless otherwise noted p; pF.
   Indication without voltage is 50V except electrolytic capacitor.

3. VOLTAGE CURRENT :
   ▭ ; DC voltage (V) at no input signal.
   ←mA ; DC current at no input signal.

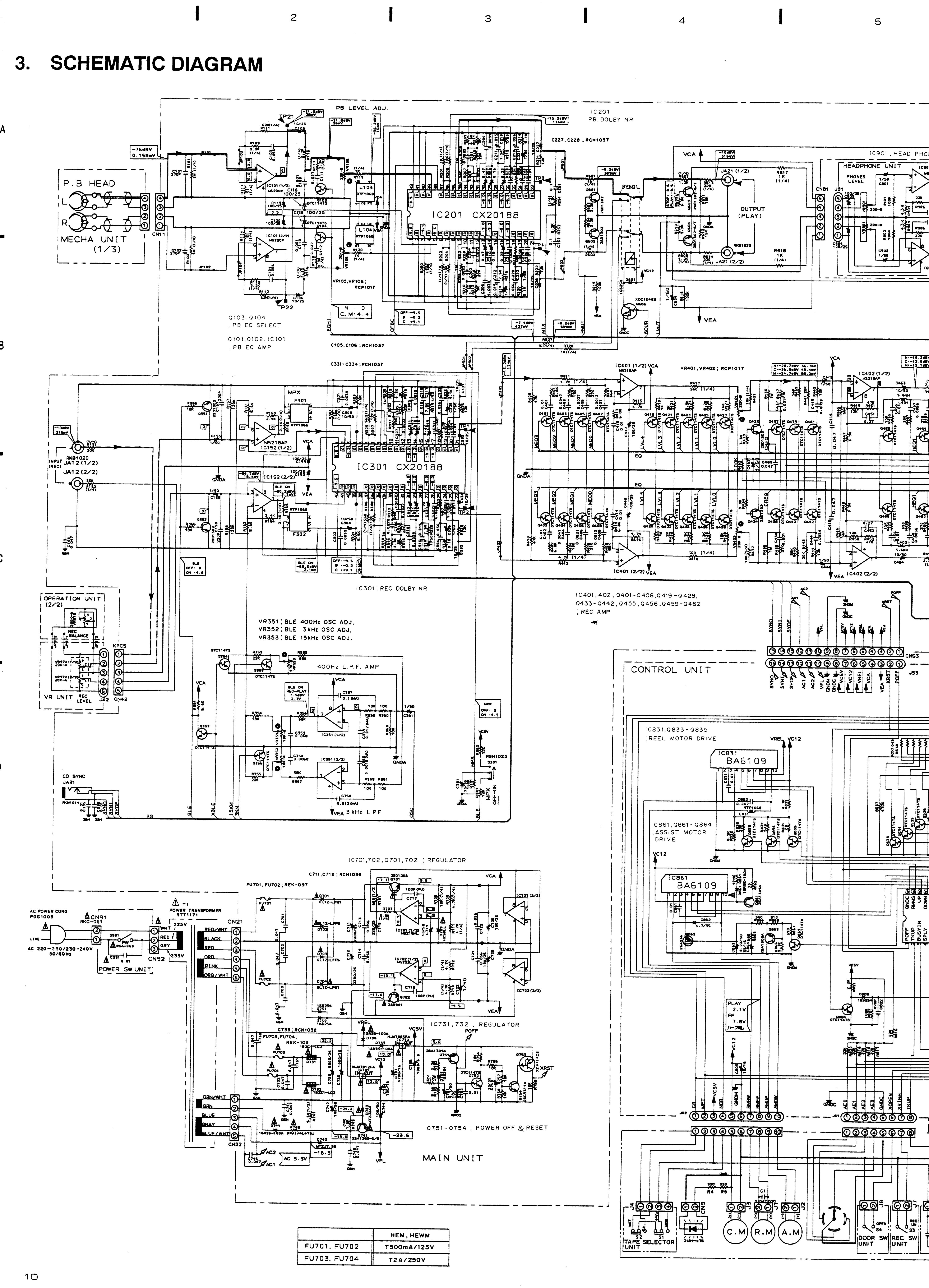
4. OTHERS :
   ➡ ; Signal route.
   ⊘ ; Adjusting point.
   The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
   ※ marked capacitors and resistors have parts numbers.

   This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

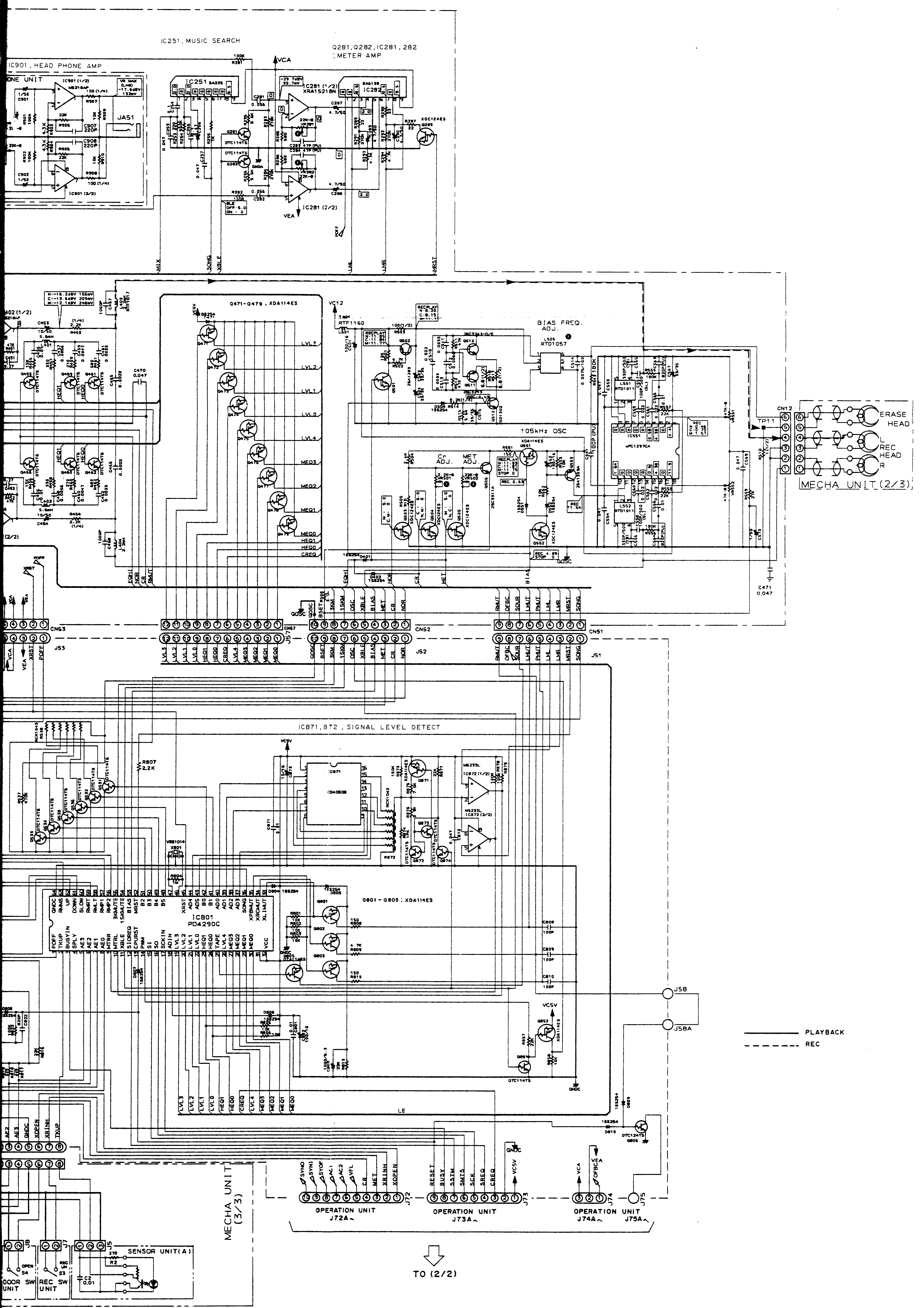
5. SWITCHES (Underline indicates switch position)
   OPERATION UNIT
   S921 : OPEN／CLOSE
   S922 : REW
   S923 : TAPE RETURN
   S924 : STOP
   S925 : COUNTER
   S926 : RESET
   S927 : PLAY
   S928 : METER RANGE
   S929 : FF
   S930 : PEAK MODE
   S931 : REC
   S932 : DISPLAY
   S933 : MONITOR SELECT
   S934 : PAUSE
   S935 : SYNCHRO
   S936 : REC／MUTE
   S951 : DOLBY NR B – OFF – C
   S961 : SUPER AUTO BLE

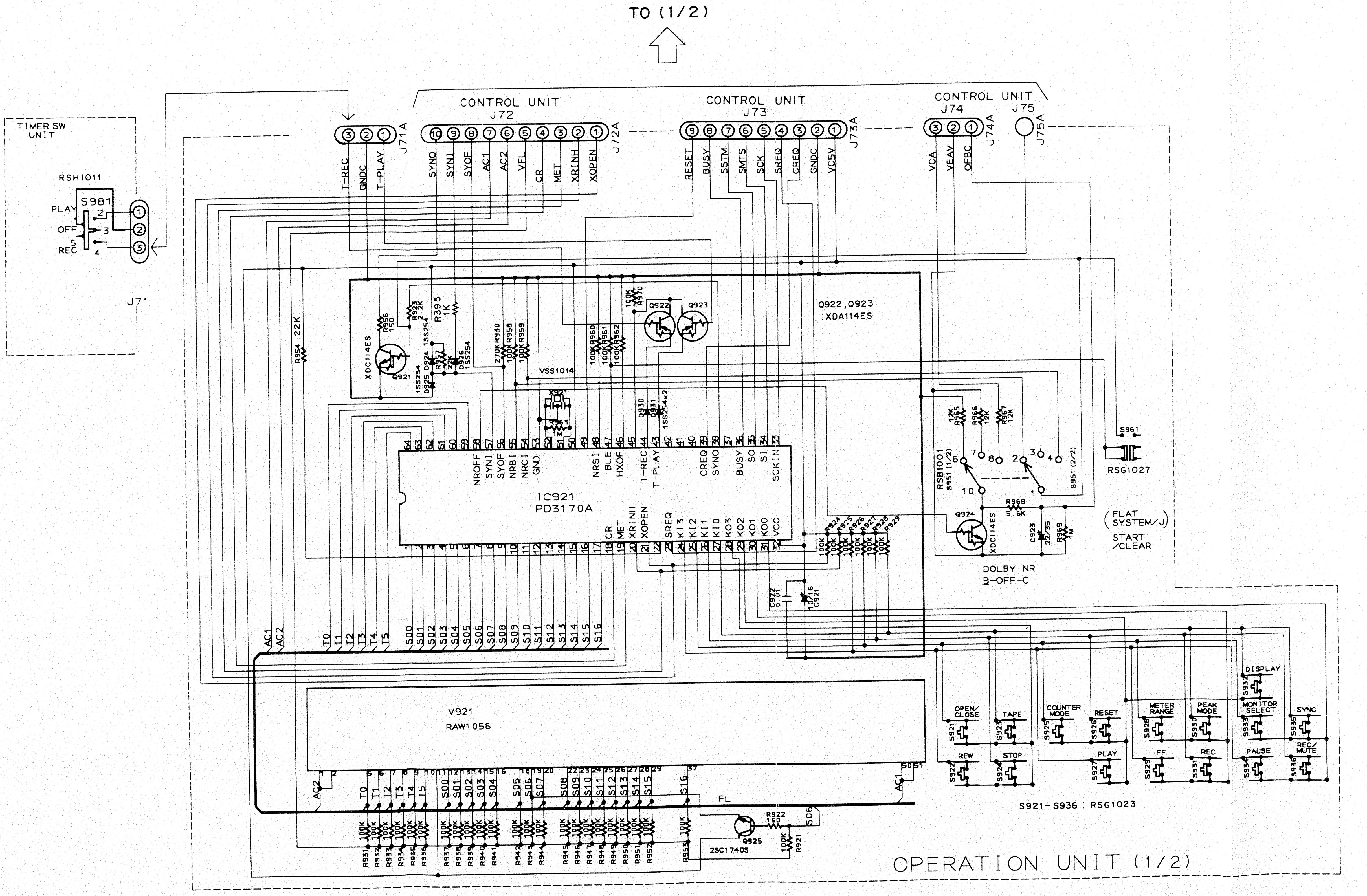
   POWER SW UNIT
   S991 : ON – OFF

3. SCHEMATIC DIAGRAM


1
2
3
4
5
A
B
C
D
E
F
PB LEVEL ADJ.
IC201
PB DOLBY NR
IC201 CX20188
P.B HEAD
MECHA UNIT
(1/3)
CN11
TP21
TP22
Q103,Q104
, PB EQ SELECT
Q101,Q102,IC101
, PB EQ AMP
C105,C106 ; RCH1037
C227,C228 ; RCH1037
VR105,VR106 ;
RCP1017
N : 0
C.M: 4.4
OUTPUT
(PLAY)
JA21 (1/2)
JA21 (2/2)
VCA
VEA
IC901, HEAD PHO
HEADPHONE UNIT
PHONES
LEVEL
CN81
J81
C331-C334 ; RCH1037
MPX
F301
F302
IC152 (1/2)
IC152 (2/2)
IC301 CX20188
INPUT
(REC)
JA12 (1/2)
JA12 (2/2)
RKB1020
IC301, REC DOLBY NR
IC401 (1/2)
IC401 (2/2)
IC402 (1/2)
IC402 (2/2)
VR401, VR402 ; RCP1017
EQ
IC401, 402, Q401-Q408, Q419-Q428,
Q433-Q442, Q455, Q456, Q459-Q462
, REC AMP
OPERATION UNIT
(2/2)
REC
BALANCE
VR UNIT
REC
LEVEL
J42
CN42
KPC5
VR351 ; BLE 400Hz OSC ADJ.
VR352 ; BLE 3kHz OSC ADJ.
VR353 ; BLE 15kHz OSC ADJ.
400Hz L.P.F. AMP
IC351 (1/2)
IC351 (2/2)
3kHz LPF
CD SYNC
JA31
MPX
OFF-ON
CONTROL UNIT
CN53
J53
IC831, Q833-Q835
, REEL MOTOR DRIVE
IC831
BA6109
IC861, Q861-Q864
, ASSIST MOTOR
DRIVE
IC861
BA6109
IC701, 702, Q701, 702 ; REGULATOR
C711, C712 ; RCH1036
FU701, FU702 ; REK-097
AC POWER CORD
PDG1003
CN91
RKC-061
LIVE
AC 220-230/230-240V
50/60Hz
POWER SW UNIT
CN92
T1
POWER TRANSFORMER
RTT1171
CN21
RED/WHT
BLACK
RED
ORG
PINK
ORG/WHT
225V
235V
IC731, 732, REGULATOR
C733 ; RCH1032
FU703, FU704 ;
REK-103
POFF
XRST
GRN/WHT
GRN
BLUE
GRAY
BLUE/WHT
CN22
AC 5.3V
Q751-Q754 ; POWER OFF & RESET
MAIN UNIT
VFL
PLAY
2.1V
FF
7.8V
TAPE SELECTOR
UNIT
C.M
R.M
A.M
DOOR SW
UNIT
REC SW
UNIT

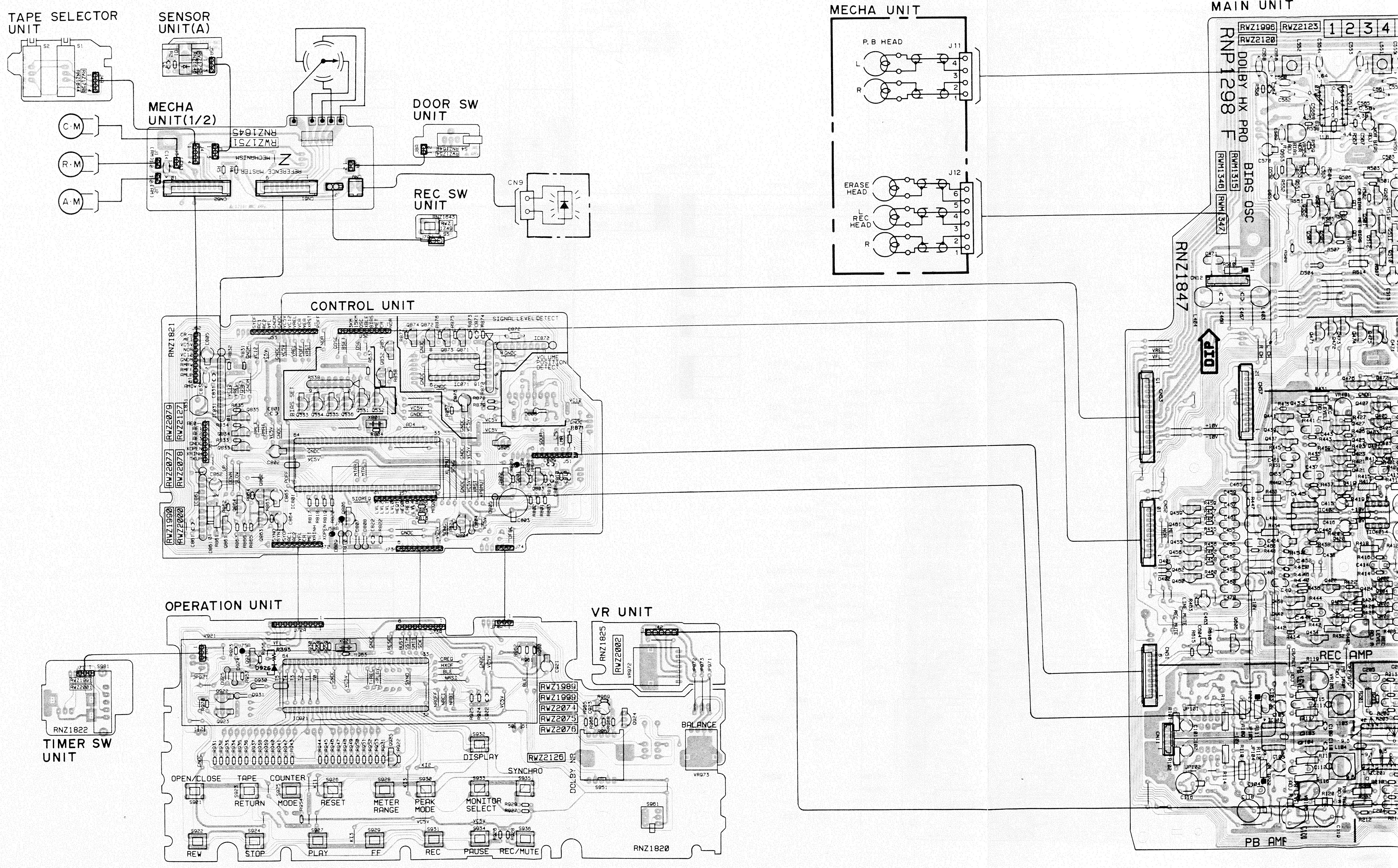
	HEM, HEWM
FU701, FU702	T500mA/125V
FU703, FU704	T2A/250V

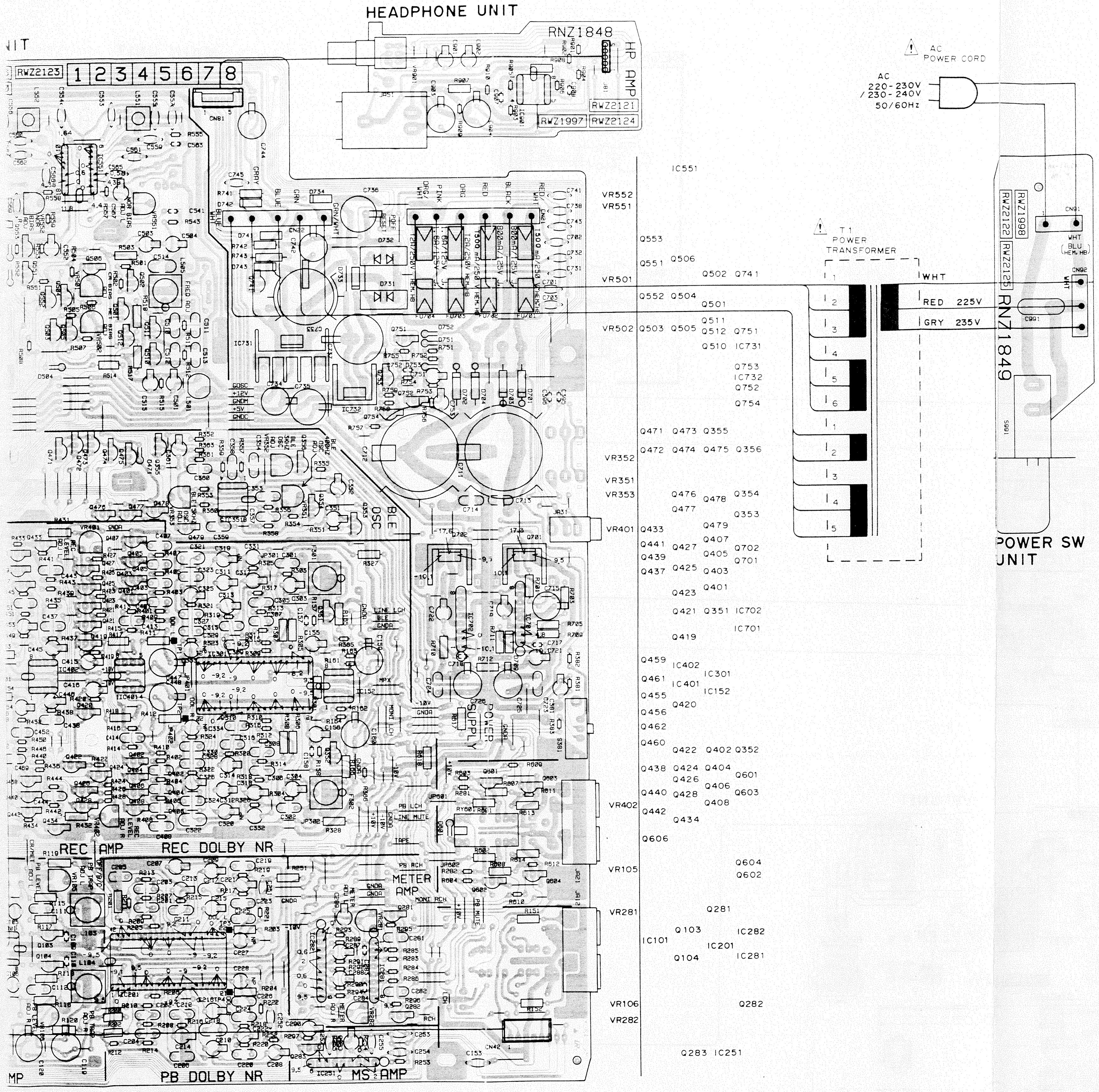

IC251 , MUSIC SEARCH
Q281,Q282,IC281,282
METER AMP
IC901 , HEAD PHONE AMP
ONE UNIT
JA51
VCA
VEA
IC281 (1/2) XRA15218N
IC281 (2/2)
IC282
IC251 BA335
Q471-Q479 , XDA114ES
LVL3
LVL2
LVL1
LVL0
LVL4
MEQ3
MEQ2
MEQ1
MEQ0
HEQ1
HEQ0
CREQ
VC12
RTF1160
BIAS FREQ. ADJ.
RTD1057
105kHz OSC
Cr ADJ.
MET ADJ.
IC551
uPC1297CA
TP11
CN12
ERASE HEAD
L REC HEAD R
MECHA UNIT (2/3)
C471 0.047
CN53
J53
CN57
J57
CN52
J52
CN51
J51
IC871,872 , SIGNAL LEVEL DETECT
IC871
IC872 (1/2)
IC872 (2/2)
IC801
PD4290C
Q801 - Q805 ; XDA114ES
J58
J58A
PLAYBACK
REC
LE
MECHA UNIT (3/3)
SENSOR UNIT(A)
DOOR SW UNIT
REC SW UNIT
J72
J73
J74
J75
OPERATION UNIT J72A
OPERATION UNIT J73A
OPERATION UNIT J74A
J75A
TO (2/2)
5
6
7
8
9
B
C
D
E
F

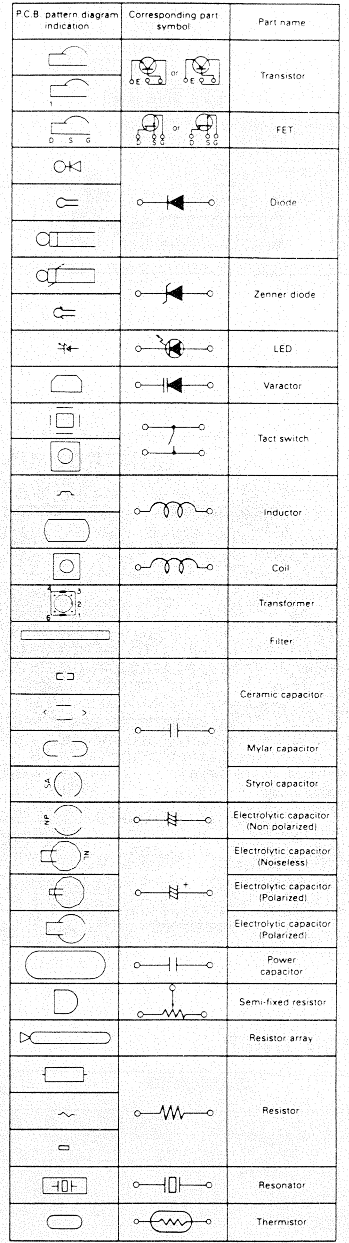

TO (1/2)
TIMER SW UNIT
RSH1011
S981
PLAY
OFF
REC
J71
CONTROL UNIT
J72
J72A
J71A
CONTROL UNIT
J73
J73A
CONTROL UNIT
J74
J75
J74A
J75A
T-REC
GNDC
T-PLAY
SYNO
SYN1
SYOF
AC1
AC2
VFL
CR
MET
XRINH
XOPEN
RESET
BUSY
SSTM
SMTS
SCK
SREQ
CREQ
GNDC
VC5V
VCA
VEAV
OFBC
R954 22K
XDC114ES
Q921
R936 150
R923 2.2K
R395 1K
1SS254
D924
D925
R957 22K
D926
270K R930
100K R958
100K R959
VSS1014
X921
R963 1M
100K R960
100K R961
100K R962
100K R970
Q922
Q923
Q922,Q923 : XDA114ES
D930
D931
1SS254×2
IC921
PD3170A
NROFF
SYN1
SYOF
NRBI
NRCI
GND
NRSI
BLE
HXOF
T-REC
T-PLAY
CREQ
SYNO
BUSY
SO
SI
SCKIN
CR
MET
XRINH
XOPEN
SREQ
KI3
KI2
KI1
KI0
KO3
KO2
KO1
KO0
VCC
R924
R925
R926
R927
R928
R929
100K
C922 0.01
C921 10/16
RSB1001
S951 (1/2)
S951 (2/2)
R965 12K
R966 12K
R967 12K
R968 5.6K
Q924
XDC114ES
C923 22/35
R969 1M
DOLBY NR
B-OFF-C
S961
RSG1027
FLAT (SYSTEM/J)
START /CLEAR
AC1
AC2
T0 T1 T2 T3 T4 T5
S00 S01 S02 S03 S04 S05 S06 S07 S08 S09 S10 S11 S12 S13 S14 S15 S16
V921
RAW1056
FL
R922 1K
Q925
2SC1740S
100K R921
R931 R932 R933 R934 R935 R936 R937 R938 R939 R940 R941 R942 R943 R944 R945 R946 R947 R948 R949 R950 R951 R952 R953
100K
S051
OPEN/ CLOSE
TAPE
COUNTER MODE
RESET
METER RANGE
PEAK MODE
DISPLAY
MONITOR SELECT
SYNC
REW
STOP
PLAY
FF
REC
PAUSE
REC/ MUTE
S921 S922 S923 S924 S925 S926 S927 S928 S929 S930 S931 S932 S933 S934 S935 S936
S921-S936 : RSG1023

OPERATION UNIT (1/2)

4. P.C. BOARDS CONNECTION DIAGRAM


TAPE SELECTOR UNIT
SENSOR UNIT(A)
MECHA UNIT(1/2)
RNZ1645
RWZ1751
MECHANISM
REFERENCE MASTER
C·M
R·M
A·M
DOOR SW UNIT
REC SW UNIT
RNZ1843
CN9
MECHA UNIT
P.B HEAD
L
R
J11
J12
ERASE HEAD
L REC HEAD
R
MAIN UNIT
RWZ1996
RWZ2123
RWZ2120
1 2 3 4
RNP1298 F
DOLBY HX PRO
BIAS OSC
RWM1346
RWM1315
RWM1347
RNZ1847
DIP
REC AMP
PB AMP
CONTROL UNIT
RNZ1821
SIGNAL LEVEL DETECT
VOLUME POSITION DETECT
BIAS SET
RWZ2079
RWZ2127
RWZ2077
RWZ2078
RWZ1990
RWZ2000
OPERATION UNIT
RWZ1989
RWZ1999
RWZ2074
RWZ2075
RWZ2076
RWZ2126
DISPLAY
SYNCHRO
OPEN/CLOSE
TAPE RETURN
COUNTER MODE
RESET
METER RANGE
PEAK MODE
MONITOR SELECT
REW
STOP
PLAY
FF
REC
PAUSE
REC/MUTE
DOLBY NR
VR UNIT
RNZ1825
RWZ2002
BALANCE
RNZ1820
TIMER SW UNIT
RNZ1822
RWZ1991
RWZ2001

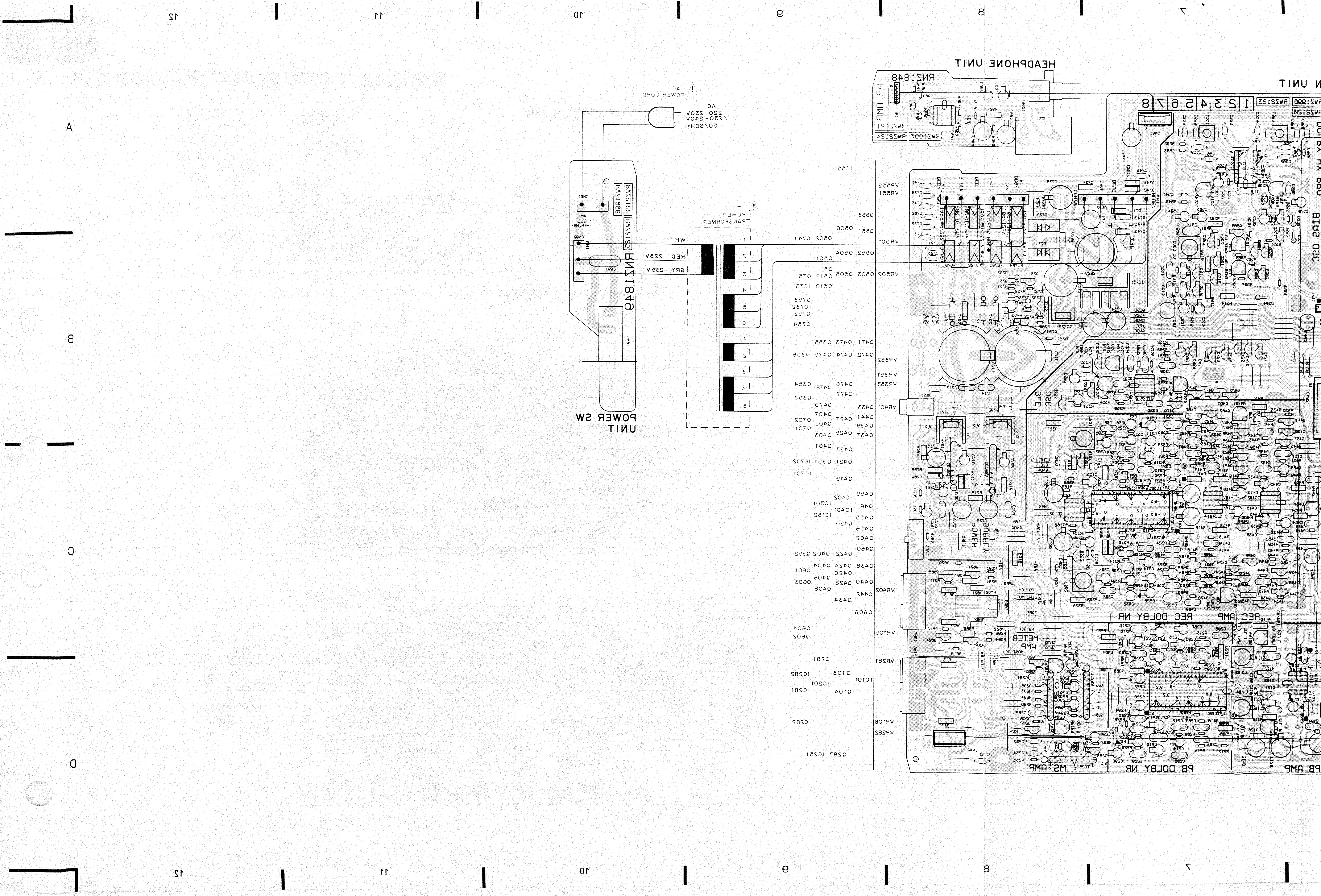

HEADPHONE UNIT
RNZ1848
HP AMP
RWZ2121
RWZ1997
RWZ2124
NIT
RWZ2123
1 2 3 4 5 6 7 8
CN81
AC POWER CORD
AC 220-230V / 230-240V 50/60Hz
T1 POWER TRANSFORMER
WHT
RED 225V
GRY 235V
RWZ1998
RWZ2122
RWZ2125
RNZ1849
CN91
CN92
WHT
BLU
S901
POWER SW UNIT
IC551
VR552
VR551
Q553
Q551
Q506
Q502
Q741
VR501
Q552
Q504
Q501
VR502
Q503
Q505
Q511
Q512
Q751
Q510
IC731
Q753
IC732
Q752
Q754
Q471
Q473
Q355
Q472
Q474
Q475
Q356
VR352
VR351
VR353
Q476
Q478
Q354
Q477
Q353
Q479
VR401
Q433
Q407
Q441
Q427
Q702
Q439
Q405
Q701
Q437
Q425
Q403
Q423
Q401
Q421
Q351
IC702
IC701
Q419
Q459
IC402
Q461
IC401
IC301
Q455
IC152
Q420
Q456
Q462
Q460
Q422
Q402
Q352
Q438
Q424
Q404
Q601
Q426
Q406
Q440
Q428
Q603
VR402
Q408
Q442
Q434
Q606
VR105
Q604
Q602
VR281
Q281
Q103
IC282
IC101
IC201
Q104
IC281
VR106
Q282
VR282
Q283
IC251
BLE OSC
POWER SUPPLY
METER AMP
REC AMP
REC DOLBY NR
PB DOLBY NR
MS AMP
AMP



P.C.B. pattern diagram indication	Corresponding part symbol	Part name
		Transistor
D S G	D S G or D S G	FET
		Diode
		Zenner diode
		LED
		Varactor
		Tact switch
		Inductor
		Coil
4 3 2 6 1		Transformer
		Filter
		Ceramic capacitor
		Mylar capacitor
SA		Styrol capacitor
NP		Electrolytic capacitor (Non polarized)
NL		Electrolytic capacitor (Noiseless)
	+	Electrolytic capacitor (Polarized)
		Electrolytic capacitor (Polarized)
		Power capacitor
		Semi-fixed resistor
		Resistor array
		Resistor
		Resonator
		Thermistor

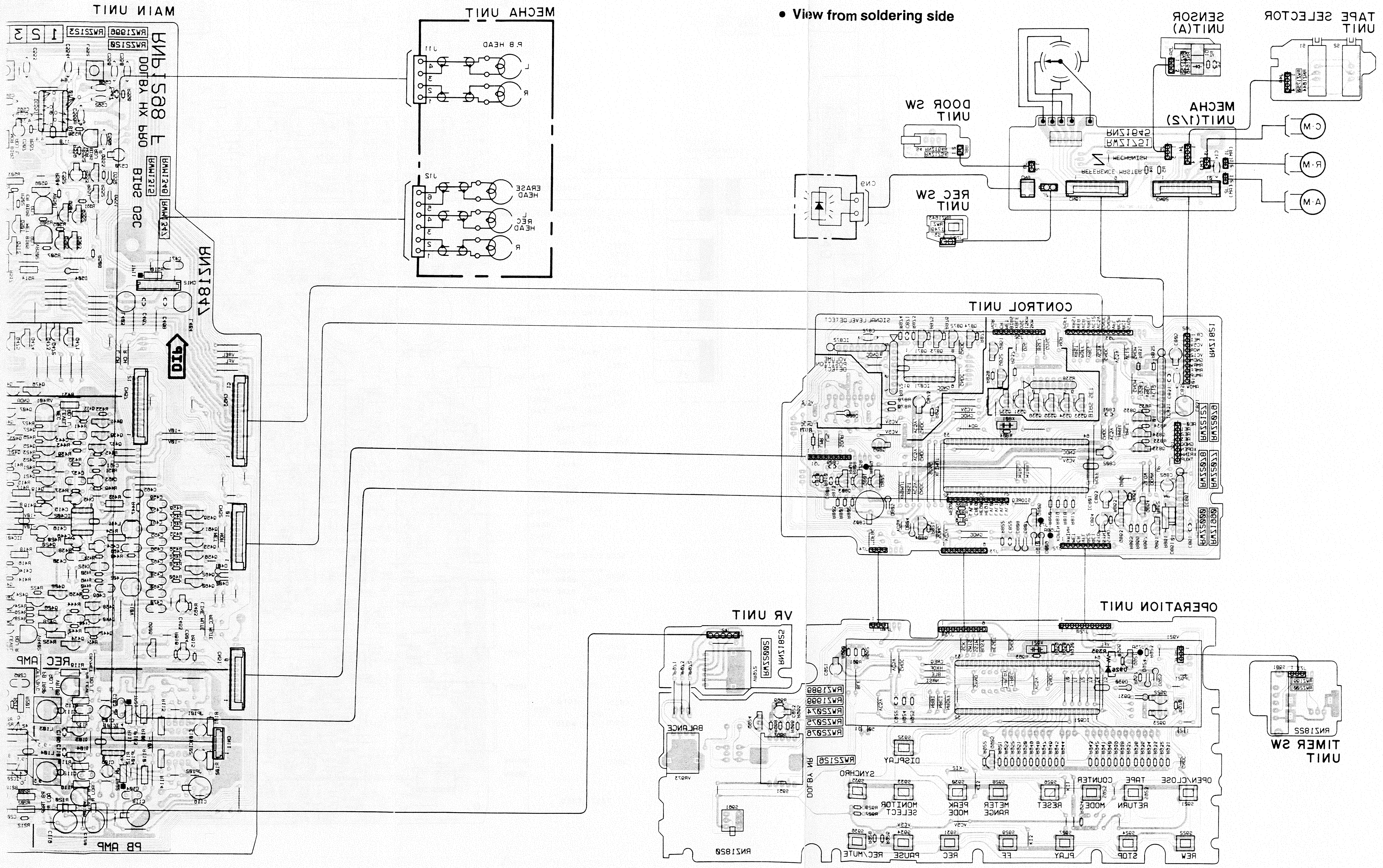
1. This P.C.B. connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
3. The capacitor terminal marked with ▭ shows negative terminal.
4. The diode marked with ○ shows cathode side.
5. The transistor terminal marked with ▭ shows emitter.

A
B
C
D


12
11
10
9
8
7
A
B
C
D
HEADPHONE UNIT
RNZ1848
HP AMP
RWZ1321
RWZ1324
RWZ1997
UNIT
RWZ1999
RWZ2123
RWZ2128
1 2 3 4 5 6 7 8
AC POWER CORD
AC 220-230V / 230-240V 50/60Hz
T1 POWER TRANSFORMER
WHT
RED 225V
GRY 225V
RNZ1849
RWZ1514
RWZ1515
RWZ1608
POWER SW UNIT
CN91
CN92
C901
S901
OSC BIAS
REC AMP
REC DOLBY NR
PB DOLBY NR
PB AMP
MS AMP
METER AMP
TAPE
VR551
VR552
VR501
VR502
VR331
VR332
VR401
VR402
VR105
VR106
VR281
VR282
IC551
IC101
IC251
IC281
IC282
IC301

4. P.C. BOARDS CONNECTION DIAGRAM

- View from soldering side


6
5
4
3
2
1
A
B
C
D
MAIN UNIT
RNP1528 E
DOLBY HX PRO
BIAS OSC
RNZ1847
PB AMP
REC AMP
DIP
MECHA UNIT
P.B HEAD
L
R
ERASE HEAD
L
REC HEAD
R
J11
J12
TAPE SELECTOR UNIT
SENSOR (A) UNIT
DOOR SW UNIT
MECHA UNIT(1/2)
REC SW UNIT
M C
M R
M A
CONTROL UNIT
VR UNIT
BALANCE
OPERATION UNIT
TIMER SW UNIT
RNZ1852
RNZ1820
DISPLAY
SYNCHRO
DOLBY NR
MONITOR SELECT
PEAK MODE
METER RANGE
RESET
COUNTER MODE
TAPE RETURN
OPEN/CLOSE
REC/MUTE
PAUSE
REC
FF
PLAY
STOP
REW

5. P.C.B's PARTS LIST

NOTES:

- Parts without part number cannot be supplied.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J=5%, and K=10%)
560 Ω → 56 × 10^1 → 561 ································ RD1/4PS $\boxed{5}\boxed{6}\boxed{1}$ J
47k Ω → 47 × 10^3 → 473 ································ RD1/4PS $\boxed{4}\boxed{7}\boxed{3}$ J
0.5 Ω → 0R5 ·· RN2H $\boxed{0}\boxed{R}\boxed{5}$ K
1 Ω → 010 ·· RS1P $\boxed{0}\boxed{1}\boxed{0}$ K
Ex.2 When there are 3 effective digits (such as in high precision metal film resistors).
5.62k Ω → 562 × 10^1 → 5621 ································ RN1/4SR $\boxed{5}\boxed{6}\boxed{2}\boxed{1}$ F

REC SW UNIT

SWITCHES

Mark	No.	Description	Part No.
	S3	SWITCH	RSG-143

TAPE SELECTOR UNIT

SWITCHES

Mark	No.	Description	Part No.
	S1, 2		RSH-070

SENSOR UNIT(A)

SEMICONDUCTORS

Mark	No.	Description	Part No.
	D1		GP1A51HR

CAPACITORS

Mark	No.	Description	Part No.
	C2	CERAMIC CAPACITOR	CKPUYY103N16

RESISTORS

Mark	No.	Description	Part No.
	R2	CARBONFILM RESISTOR	RD1/6PM□□□J

TIMER SW UNIT)

SWITCHES

Mark	No.	Description	Part No.
	S981		RSH1011

VR UNIT

RESISTORS

Mark	No.	Description	Part No.
	VR972	VARIABLE RESISTOR(20K)	RCV1058

OPERATION UNIT

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC921		PD3170A
	Q921	DIGITAL TRANSISTOR	XDC114ES
	Q922, 923	DIGITAL TRANSISTOR	XDA114ES
	Q924	DIGITAL TRANSISTOR	XDC114ES
	Q925	TRANSISTOR	2SC1740S
	D924-926	DIODE	1SS254
	D930, 931	DIODE	1SS254

SWITCHES

Mark	No.	Description	Part No.
	S921-936	SWITCH	RSG1023
	S951		RSB1001
	S961	SWITCH	RSG1027

CAPACITORS

Mark	No.	Description	Part No.
	C921	ELECTR. CAPACITOR	CEAS100M16
	C922	CERAMIC CAPACITOR	CKPUYY103N16
	C923	ELECTR. CAPACITOR	CEAS220M35

RESISTORS

Mark	No.	Description	Part No.
	R395		RD1/6PM□□□J
	R921-954	CARBONFILM RESISTOR	RD1/6PM□□□J
	R956-963	CARBONFILM RESISTOR	RD1/6PM□□□J
	R965-970	CARBONFILM RESISTOR	RD1/6PM□□□J
	VR973	VARIABLE RESISTOR(200K)	RCV1046

OTHERS

Mark	No.	Description	Part No.
	V921		RAW1056
	X921	CERAMIC RESONATOR	VSS1014

CONTROL UNIT

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC801	MAIN CPU	PD4290C
	IC831	IC	BA6109
	IC861	IC	BA6109
	IC871	LOGIC IC	CD4050B
	IC872	DUAL-COMPARATOR IC	M5233L
	Q531-536	DIGITAL TRANSISTOR	DTC114TS
	Q801-803	DIGITAL TRANSISTOR	XDA114ES
	Q804	DIGITAL TRANSISTOR	DTC114TS
	Q805	DIGITAL TRANSISTOR	XDA114ES
	Q806	TRANSISTOR	DTC124TS
	Q833-835	DIGITAL TRANSISTOR	DTC114TS
	Q851	DIGITAL TRANSISTOR	DTC114TS
	Q852	DIGITAL TRANSISTOR	XDA114ES
	Q861	TRANSISTOR	2SA1309A
	Q862	TRANSISTOR	2SA936
	Q863	TRANSISTOR	2SA1309A
	Q864	DIGITAL TRANSISTOR	DTC114TS
	Q871	DIGITAL TRANSISTOR	XDA114ES
	Q872-874	DIGITAL TRANSISTOR	DTC114TS

Mark	No.	Description	Part No.
	D804-810	DIODE	1SS254
⚠	D861	RECTIFIER DIODE	1SR35-100A

COILS/TRANSFORMERS

Mark	No.	Description	Part No.
	L831		RTF1068

CAPACITORS

Mark	No.	Description	Part No.
	C801	CERAMIC CAPACITOR	CKPUYY103N16
	C802	ELECTR. CAPACITOR	CEAS101M10
	C803	ELECTR. CAPACITOR	CEAS102M6R3
	C805	ELECTR. CAPACITOR	CEAS100M16
	C808-810	AXIAL CAPACITOR	CKPUYB101K50
	C822	AXIAL CAPACITOR	CKPUYB821K50
	C831	CERAMIC CAPACITOR	CKPUYY103N16
	C832	CERAMIC CAPACITOR	CKCYF473Z50
	C861	CERAMIC CAPACITOR	CKPUYY103N16
	C862	ELECTR. CAPACITOR	CEANP4R7M35
	C863	ELECTR. CAPACITOR	CEASR22M50
	C864	ELECTR. CAPACITOR	CEAS330M16
	C871	CERAMIC CAPACITOR	CKPUYY103N16
	C872	CERAMIC CAPACITOR	CKCYF473Z50
	C873	ELECTR. CAPACITOR	CEAS100M16

RESISTORS

Mark	No.	Description	Part No.
	R537	CARBONFILM RESISTOR	RD1/6PM□□□J
	R538		RCX1043
	R801-810	CARBONFILM RESISTOR	RD1/6PM□□□J
	R813	CARBONFILM RESISTOR	RD1/6PM□□□J
	R816-822	CARBONFILM RESISTOR	RD1/6PM□□□J
	R831-835	CARBONFILM RESISTOR	RD1/6PM□□□J
	R857, 858	CARBONFILM RESISTOR	RD1/6PM□□□J
	R861	METAL OXIDE RESISTOR	RS1LMF□□□J
	R862-867	CARBONFILM RESISTOR	RD1/6PM□□□J
	R872	(10K)	RCX1042
	R873-876	METALFILM RESISTOR	RN1/6PQ□□□□F
	R877-879	CARBONFILM RESISTOR	RD1/6PM□□□J

OTHERS

Mark	No.	Description	Part No.
	X801	CERAMIC RESONATOR	VSS1014

MAIN UNIT

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC101	OP-AMP-IC	M5220P
	IC152	OP-AMP, IC	M5218AP
	IC201	DOLBY-B, C IC	CX20188
	IC251	IC	BA335
	IC281	OP-AMP IC	XRA15218N
	IC282		BA6138
	IC301	DOLBY-B, C IC	CX20188
	IC351	OP-AMP IC	XRA15218
	IC401, 402	OP-AMP, IC	M5218AP
	IC551	DOLBY HX PRO IC	UPC1297CA
	IC701	OP-AMP, IC	M5218AL
	IC702	OP-AMP IC	M5223L
⚠	IC731	REGULATOR IC	NJM7812FA
⚠	IC732	REGULATOR IC	NJM7805FA
	Q103, 104	DIGITAL TRANSISTOR	DTC114TS
	Q281, 282	DIGITAL TRANSISTOR	DTC114TS
	Q283	TRANSISTOR	XDC124ES
	Q351, 352	TRANSISTOR	2SD1302
	Q353-356	DIGITAL TRANSISTOR	DTC114TS
	Q401-408	DIGITAL TRANSISTOR	DTC114TS
	Q419-428	DIGITAL TRANSISTOR	DTC114TS
	Q433, 434	TRANSISTOR	2SD1302
	Q437-442	DIGITAL TRANSISTOR	DTC114TS
	Q455, 456	DIGITAL TRANSISTOR	DTC114TS
	Q459-462	DIGITAL TRANSISTOR	DTC114TS
	Q471-479	DIGITAL TRANSISTOR	XDA114ES
	Q501	TRANSISTOR	XDC124ES
	Q502	TRANSISTOR	2SA1283
	Q503-505	TRANSISTOR	XDC124ES
	Q506	TRANSISTOR	2SC3311A
	Q510, 511	TRANSISTOR	2SC3243
	Q512	TRANSISTOR	2SD1302
	Q551	DIGITAL TRANSISTOR	XDA114ES
	Q552	TRANSISTOR	XDC124ES
	Q553	TRANSISTOR	2SA1309A
	Q601-604	TRANSISTOR	2SD1302
	Q606	TRANSISTOR	XDC124ES
⚠	Q701	TRANSISTOR	2SD1266
⚠	Q702	TRANSISTOR	2SB941
⚠	Q741	TRANSISTOR	2SA1283
	Q751	TRANSISTOR	2SA1309A
	Q752	DIGITAL TRANSISTOR	DTC114TS
	Q753	DIGITAL TRANSISTOR	XDA114ES
	Q754	TRANSISTOR	2SC3311A
	D401, 402	DIODE	1SS254
	D471	DIODE	1SS254
	D504	DIODE	1SS254
	D551, 552	DIODE	1SS254
	D601	DIODE	1SS254
⚠	D701	DIODE	EL1Z-LFG1
⚠	D702, 703	DIODE	EL1Z-LFF5
⚠	D704	DIODE	EL1Z-LFG1
⚠	D709	ZENER DIODE	HZ5BLL
⚠	D731	POWER DIODE	1B2C1-LC2
⚠	D732	POWER DIODE	1B2Z1-LC2
⚠	D733, 734	RECTIFIER DIODE	1SR35-100A
⚠	D741	RECTIFIER DIODE	1SR35-100A
	D742	ZENER DIODE	MTZJ7.5B
⚠	D743	ZENER DIODE	MTZJ24A
	D751-753	DIODE	1SS254

SWITCHES

Mark	No.	Description	Part No.
	S381		RSH1025

RELAYS

Mark	No.	Description	Part No.
	RY601		RSR1016

COILS/TRANSFORMERS

Mark	No.	Description	Part No.
	L103, 104	COIL	RTF1060
	L401, 402	COIL	RTF1022
	L403, 404		RTF1017

Mark	No.	Description	Part No.
	L501		RTF1160
	L505		RTD1057
	L551, 552		RTD1011
	F301, 302	FILTER	RTF1066

CAPACITORS

Mark	No.	Description	Part No.
	C101, 102	PL. STYRENE CAPACITOR	CQSF271J50
	C103, 104	AUDIO FILM CAPACITOR	CFTXA563J50
	C105, 106	(10/25)	RCH1037
	C109, 110	CERAMIC CAPACITOR	CKPUYB102K50
	C111, 112	AUDIO FILM CAPACITOR	CFTXA273J50
	C116	(100/25)	PCH1076
	C118-120	(100/25)	PCH1076
	C153	CERAMIC CAPACITOR	CKCYF473Z50
	C155, 156	ELECTR. CAPACITOR	CEYA010M50
	C157, 158	AXIAL CAPACITOR	CKPUYB221K50
	C159, 160	ELECTR. CAPACITOR(100/25)	PCH1076
	C201-204	AUDIO FILM CAPACITOR	CFTXA222J50
	C205, 206	AUDIO FILM CAPACITOR	CFTXA392J50
	C207, 208	ELECTR. CAPACITOR	CEASR47M50
	C209, 210	ELECTR. CAPACITOR	CEASR15M50
	C211, 212	AUDIO FILM CAPACITOR	CFTXA153J50
	C213, 214	ELECTR. CAPACITOR	CEYA010M50
	C215, 216	ELECTR. CAPACITOR	CEASR22M50
	C217, 218	AUDIO FILM CAPACITOR	CFTXA683J50
	C219, 220	AUDIO FILM CAPACITOR	CFTXA563J50
	C221, 222	ELECTR. CAPACITOR	CEYA010M50
	C223, 224	AUDIO FILM CAPACITOR	CFTXA562J50
	C225, 226	AUDIO FILM CAPACITOR	CFTXA103J50
	C227, 228	(10/25)	RCH1037
	C251, 252	AUDIO FILM CAPACITOR	CFTXA104J50
	C253	AUDIO FILM CAPACITOR	CFTXA473J50
	C254, 255	AUDIO FILM CAPACITOR	CFTXA104J50
	C256	ELECTR. CAPACITOR	CEASR47M50
	C257	AUDIO FILM CAPACITOR	CFTXA473J50
	C281, 282	AUDIO FILM CAPACITOR	CFTXA563J50
	C283, 284	AXIAL CERAMIC C.	CCPUSL470J50
	C287-290	ELECTR. CAPACITOR	CEAS4R7M50
	C301, 302	AUDIO FILM CAPACITOR	CFTXA392J50
	C303, 304	ELECTR. CAPACITOR	CEYA100M50
	C305-308	AUDIO FILM CAPACITOR	CFTXA222J50
	C309, 310	AUDIO FILM CAPACITOR	CFTXA392J50
	C311, 312	ELECTR. CAPACITOR	CEASR47M50
	C313, 314	ELECTR. CAPACITOR	CEASR15M50
	C315, 316	AUDIO FILM CAPACITOR	CFTXA153J50
	C317, 318	ELECTR. CAPACITOR	CEYA010M50
	C319, 320	ELECTR. CAPACITOR	CEASR22M50
	C321, 322	AUDIO FILM CAPACITOR	CFTXA683J50
	C323, 324	AUDIO FILM CAPACITOR	CFTXA563J50
	C325, 326	ELECTR. CAPACITOR	CEYA010M50
	C327, 328	AUDIO FILM CAPACITOR	CFTXA562J50
	C329, 330	AUDIO FILM CAPACITOR	CFTXA103J50
	C331-334	(10/25)	RCH1037
	C353	AUDIO FILM CAPACITOR	CFTXA683J50
	C354	AUDIO FILM CAPACITOR	CFTXA682J50
	C357	MYLOR FILM CAPACITOR	CQMA104J50

Mark	No.	Description	Part No.
	C358, 359	MYLOR FILM CAPACITOR	CQMA123J50
	C360	MYLOR FILM CAPACITOR	CQMA182J50
	C361	ELECTR. CAPACITOR	CEAS010M50
	C381	ELECTR. CAPACITOR	CEAS330M35
	C395, 396	CERAMIC CAPACITOR	CKPUYF103Z25
	C401, 402	AUDIO FILM CAPACITOR	CFTXA103J50
	C403, 404	AUDIO FILM CAPACITOR	CFTXA472J50
	C405, 406	AUDIO FILM CAPACITOR	CFTXA272J50
	C407, 408	AUDIO FILM CAPACITOR	CFTXA122J50
	C413, 414	AUDIO FILM CAPACITOR	CFTXA103J50
	C415, 416	AUDIO FILM CAPACITOR	CFTXA473J50
	C437, 438	AUDIO FILM CAPACITOR	CFTXA102J50
	C443, 444	AUDIO FILM CAPACITOR	CFTXA392J50
	C445, 446	ELECTR. CAPACITOR	CEYA010M50
	C447, 448	(100/25)	PCH1076
	C451, 452	AUDIO FILM CAPACITOR	CFTXA274J50
	C453, 454	ELECTR. CAPACITOR	CEYA100M50
	C455, 456	AUDIO FILM CAPACITOR	CFTXA103J50
	C457, 458	AUDIO FILM CAPACITOR	CFTXA562J50
	C459, 460	AUDIO FILM CAPACITOR	CFTXA472J50
	C461, 462	AUDIO FILM CAPACITOR	CFTXA332J50
	C463	ELECTR. CAPACITOR	CEAS010M50
	C465, 466	AUDIO FILM CAPACITOR	CFTXA222J50
	C467, 468	CERAMIC CAPACITOR	CKPUYB102K50
	C469-471	AUDIO FILM CAPACITOR	CFTXA473J50
	C501	ELECTR. CAPACITOR	CEAS101M16
	C503, 504	ELECTR. CAPACITOR	CEAS330M35
	C510	AUDIO FILM CAPACITOR	CFTXA223J50
	C511	AUDIO FILM CAPACITOR	CFTXA332J50
	C512	AUDIO FILM CAPACITOR	CFTXA682J50
	C513	AUDIO FILM CAPACITOR	CFTXA332J50
	C514	CAPACITOR	CQPA752J100
	C515	ELECTR. CAPACITOR	CEAS330M35
	C541	AXIAL CAPACITOR	CKPUYB101K50
	C552	ELECTR. CAPACITOR	CEAS101M16
	C553, 554	CERAMIC CAPACITOR	CKCYF473Z50
	C555, 556	(390P/500)	RCG1004
	C557, 558	CERAMIC CAPACITOR	CCCSL101K500
	C559-562	CERAMIC CAPACITOR	CGCYX223K25
	C563, 564	AXIAL CAPACITOR	CKPUYB821K50
	C565, 566	CERAMIC CAPACITOR	CGCYX103K25
	C567	ELECTR. CAPACITOR	CEAS330M35
	C569	CERAMIC CAPACITOR	CKCYF473Z50
	C570	ELECTR. CAPACITOR	CEAS010M50
	C604	ELECTR. CAPACITOR	CEAS010M50
	C701-703	CERAMIC CAPACITOR	CKCYF473Z50
	C711, 712	ELECTR. CAPACITOR	RCH1036
	C713, 714	AUDIO FILM CAPACITOR	CFTXA563J50
	C715	ELECTR. CAPACITOR	CEAS221M25
	C717, 718	AXIAL CAPACITOR	CKPUYB101K50
	C719	ELECTR. CAPACITOR	CEYA100M50
	C722	ELECTR. CAPACITOR	CEYA010M50
	C723, 724	AUDIO FILM CAPACITOR	CFTXA563J50
	C725, 726	(100/25)	PCH1076
	C731, 732	CERAMIC CAPACITOR	CKCYF473Z50

Mark	No.	Description	Part No.
	C733	(6800/25)	RCH1032
	C734	ELECTR. CAPACITOR	CEAS101M16
	C735	ELECTR. CAPACITOR	CEAS102M6R3
	C736	ELECTR. CAPACITOR	CEAS102M16
	C737	ELECTR. CAPACITOR	CEAS472M16
	C738	CERAMIC CAPACITOR	CKCYF473Z50
	C741	CERAMIC CAPACITOR	CKCYF473Z50
	C742	ELECTR. CAPACITOR	CEAS101M50
	C743	CERAMIC CAPACITOR	CKCYF473Z50
	C744	ELECTR. CAPACITOR	CEAS101M50
	C745	CERAMIC CAPACITOR	CKCYF473Z50
	C751	ELECTR. CAPACITOR	CEAS4R7M50
	C752	CERAMIC CAPACITOR	CKPUYF103Z25
	C753	ELECTR. CAPACITOR	CEAS330M35

RESISTORS

Mark	No.	Description	Part No.
	R101, 102	CARBONFILM RESISTOR	RD1/4PM□□□J
	R109-120	CARBONFILM RESISTOR	RD1/4PM□□□J
	R151, 152	CARBONFILM RESISTOR	RD1/4PM□□□J
	R157, 158	CARBONFILM RESISTOR	RD1/6PM□□□J
	R161-164	CARBONFILM RESISTOR	RD1/6PM□□□J
	R165, 166	CARBONFILM RESISTOR	RD1/4PM□□□J
	R200-204	CARBONFILM RESISTOR	RD1/4PM□□□J
	R205-222	CARBONFILM RESISTOR	RD1/6PM□□□J
	R251	CARBONFILM RESISTOR	RD1/4PM□□□J
	R252-255	CARBONFILM RESISTOR	RD1/6PM□□□J
	R281-286	CARBONFILM RESISTOR	RD1/6PM□□□J
	R289-297	CARBONFILM RESISTOR	RD1/6PM□□□J
	R301	CARBONFILM RESISTOR	RD1/4PM□□□J
	R303, 304	CARBONFILM RESISTOR	RD1/6PM□□□J
	R305-308	CARBONFILM RESISTOR	RD1/4PM□□□J
	R309-326	CARBONFILM RESISTOR	RD1/6PM□□□J
	R327, 328	CARBONFILM RESISTOR	RD1/4PM□□□J
	R351-361	CARBONFILM RESISTOR	RD1/6PM□□□J
	R363	CARBONFILM RESISTOR	RD1/6PM□□□J
	R365, 366	CARBONFILM RESISTOR	RD1/6PM□□□J
	R381-383	CARBONFILM RESISTOR	RD1/6PM□□□J
	R395	CARBONFILM RESISTOR	RD1/6PM□□□J
	R401-410	CARBONFILM RESISTOR	RD1/6PM□□□J
	R411, 412	CARBONFILM RESISTOR	RD1/4PM□□□J
	R413-416	CARBONFILM RESISTOR	RD1/6PM□□□J
	R417, 418	CARBONFILM RESISTOR	RD1/4PM□□□J
	R419-428	CARBONFILM RESISTOR	RD1/6PM□□□J
	R431, 432	CARBONFILM RESISTOR	RD1/4PM□□□J
	R433-452	CARBONFILM RESISTOR	RD1/6PM□□□J
	R453, 454	CARBONFILM RESISTOR	RD1/4PM□□□J
	R455-463	CARBONFILM RESISTOR	RD1/6PM□□□J
	R501, 502	CARBONFILM RESISTOR	RD1/6PM□□□J
	R503	CARBONFILM RESISTOR	RD1/2PMF□□□J
	R504, 505	CARBONFILM RESISTOR	RD1/6PM□□□J
	R508	CARBONFILM RESISTOR	RD1/6PM□□□J
	R510	CARBONFILM RESISTOR	RD1/2LF□□□J
	R511, 512	CARBONFILM RESISTOR	RD1/6PM□□□J
	R514	CARBONFILM RESISTOR	RD1/4PM□□□J
	R515	CARBONFILM RESISTOR	RD1/6PM□□□J
	R517, 518	CARBONFILM RESISTOR	RD1/2PMF□□□J
	R543	CARBONFILM RESISTOR	RD1/6PM□□□J
	R551-553	CARBONFILM RESISTOR	RD1/6PM□□□J
	R555-559	CARBONFILM RESISTOR	RD1/6PM□□□J
	R601, 602	CARBONFILM RESISTOR	RD1/4PM□□□J
	R603, 604	CARBONFILM RESISTOR	RD1/6PM□□□J
	R607, 608	CARBONFILM RESISTOR	RD1/4PM□□□J
	R609-612	CARBONFILM RESISTOR	RD1/6PM□□□J
	R613, 614	CARBONFILM RESISTOR	RD1/4PM□□□J
	R615, 616	CARBONFILM RESISTOR	RD1/6PM□□□J
	R617, 618	CARBONFILM RESISTOR	RD1/4PM□□□J
	R701	CARBONFILM RESISTOR	RD1/2PMF□□□J
	R703	CARBONFILM RESISTOR	RD1/4PM□□□J
	R705	CARBONFILM RESISTOR	RD1/4PM□□□J
	R709-712	CARBONFILM RESISTOR	RD1/4PM□□□J
	R741	CARBONFILM RESISTOR	RD1/2PMF□□□J
⚠	R742	FUSIBLE RESISTOR	RFA1/4L□□□J
	R743	METAL OXIDE RESISTOR	RS1LMF□□□J
	R751-759	CARBONFILM RESISTOR	RD1/6PM□□□J
	VR105, 106	(20K)	RCP1017
	VR281, 282	VR	VRTB6VS223
	VR351, 352	SEMI-FIXED RESISTOR	VRTB6VS103
	VR353	VR	VRTB6VS473
	VR401, 402	(20K)	RCP1017
	VR501	VR	VRTB6VS222
	VR502	VR	VRTB6VS223
	VR551, 552	VR	VRTB6VS473

OTHERS

Mark	No.	Description	Part No.
	JA12	JACK	RKB1020
	JA21	JACK	RKB1020
	JA31	JACK	RKN1014

HEAD PHONE UNIT

SEMICONDUCTORS

Mark	No.	Description	Part No.
	IC901	OP-AMP, IC	M5218AP

CAPACITORS

Mark	No.	Description	Part No.
	C901, 902	ELECTR. CAPACITOR	CEYA010M50
	C903, 904	(100/25)	PCH1076
	C907, 908	AXIAL CAPACITOR	CKPUYB221K50

RESISTORS

Mark	No.	Description	Part No.
	R901-906	CARBONFILM RESISTOR	RD1/6PM□□□J
	R907, 908	CARBONFILM RESISTOR	RD1/4PM□□□J
	R909, 910	CARBONFILM RESISTOR	RD1/6PM□□□J
	VR901	VARIABLE RESISTOR(20K)	RCV1043

OTHERS

Mark	No.	Description	Part No.
	JA51	JACK	RKN1019

POWER SW UNIT

SWITCHES

Mark	No.	Description	Part No.
⚠	S991	SWITCH	RSA-063

CAPACITORS

Mark	No.	Description	Part No.
⚠	C991	CAPACITOR (CERAMIC)	VCG-044

Mark	No.	Description	Part No.

DOOR SW UNIT

SWITCHES

Mark	No.	Description	Part No.
	S4		RSK1002

CONNECTOR UNIT

CAPACITORS

Mark	No.	Description	Part No.
	C1	CERAMIC CAPACITOR	CKCYF473Z50

RESISTORS

Mark	No.	Description	Part No.
	R4, 5	CARBONFILM RESISTOR	RD1/6PM331J

6. ADJUSTMENTS

6.1 MECHANISM RELATED ADJUSTMENT

1. Tape Speed Adjustment

Mode	Adjustment Location	Specifications
PLAY	Capstan motor adjustment hole (Refer to Fig. 1.)	Adjust so that the playback frequency is 3000 ± 5 Hz at the beginning of winding of test tape STD-301.
PLAY		Playback test tape STD-301 again and confirm that the above specifications are satisfied.

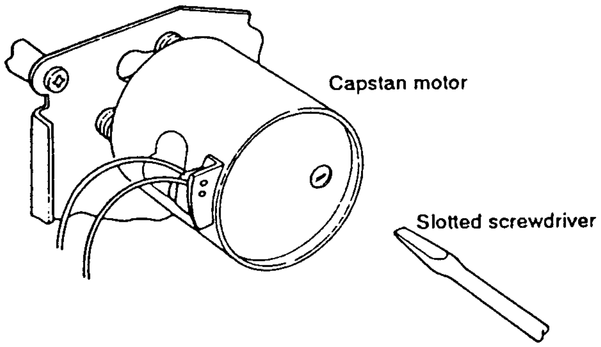

Capstan motor
Slotted screwdriver

Fig. 1

2. Adjustment of Door Damper

Adjustment Location	Specifications
Cylinder adjustment screw (Refer to Fig. 2.)	Make sure that the door opens smoothly, there is no two-stage motion, and that there is no bounding when it opens completely. (Perform with no cassette half inserted.)

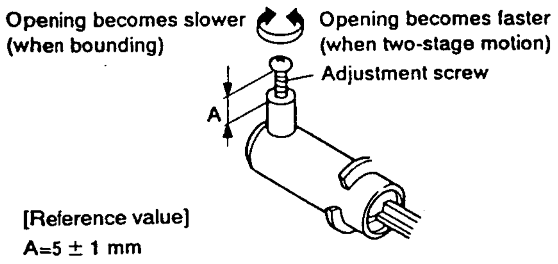

Opening becomes slower (when bounding)
Opening becomes faster (when two-stage motion)
Adjustment screw
A
[Reference value]
A=5 ± 1 mm

Fig. 2

3. Tape running and azimuth adjustment

No.	Mode	Adjustment Location	Specifications
1			Insert half mirror in side A (set screws at front).
2	PLAY	Height adjustment nut (Refer to Fig. 3.)	Playback the above tape and adjust so that there is no curling of the tape in the guide section of the head. (Refer to Fig. 4.)
3	PLAY	Azimuth adjustment screw (Refer to Fig. 3.)	Playback test tape STD-331B and adjust so that the 10 kHz output level is maximum and also so that there is no phase difference between L-ch and R-ch.
4	Check Item 2 above again and adjust again if it dnes not satisfy the specifications. (Be sure to adjust Item 3 when Item 2 is adjusted.)		

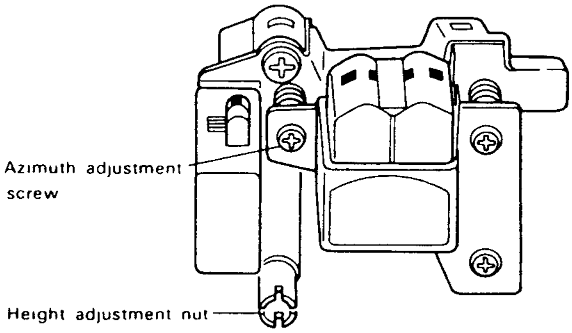

Azimuth adjustment screw
Height adjustment nut

Fig. 3

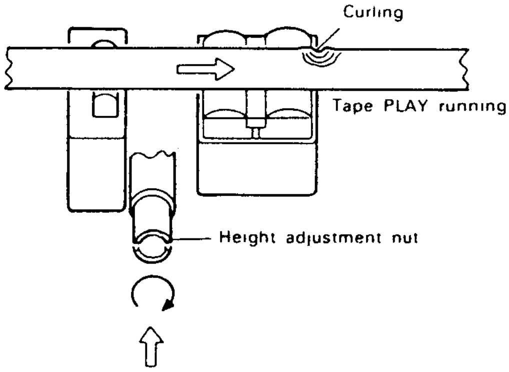

Curling
Tape PLAY running
Height adjustment nut

Fig. 4

6.2 ELECTRICAL ADJUSTMENTS

Adjustment Conditions

1. The mechanical adjustments must be completed first.
2. The head must be cleaned and demagnetized.
3. Turn power on allow the deck to warm up for at least a few minutes before commencing any electrical adjustments.
4. The reference signal is 0 dBv=1 Vrms.
5. Connect a 50 kΩ (or between 47k to 52 kΩ) load resistance to the OUTPUT terminals.
6. Unless otherwise specified, the switches listed below are left in the positions indicated.

   DOLBY NR : OFF
   TAPE SELECTOR : NORM

Test Tapes

STD-331B	: Playback adjustments (See Fig. 6-1)
STD-630	: NORMAL blank tape
STD-620	: CrO₂ blank tape
STD-610	: METAL blank tape

List of Adjustments

Playback sections

1. Head azimuth adjustment.
2. Playback level adjustment.

Recording sections

1. Bias oscillator adjustment.
2. Bias trap adjustment.
3. Recording bias adjustment.
4. Recording level adjustment.
5. Level meter check.
6. AUTO BLE adjustment.

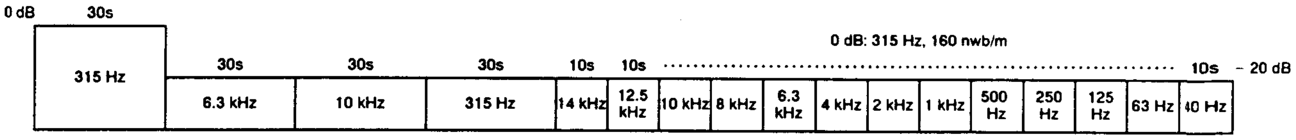

0 dB
30s
315 Hz
0 dB: 315 Hz, 160 nwb/m
30s
30s
30s
10s
10s
10s
- 20 dB
6.3 kHz
10 kHz
315 Hz
14 kHz
12.5 kHz
10 kHz
8 kHz
6.3 kHz
4 kHz
2 kHz
1 kHz
500 Hz
250 Hz
125 Hz
63 Hz
40 Hz

Fig. 6-1 Constants of the test tape STD-331B

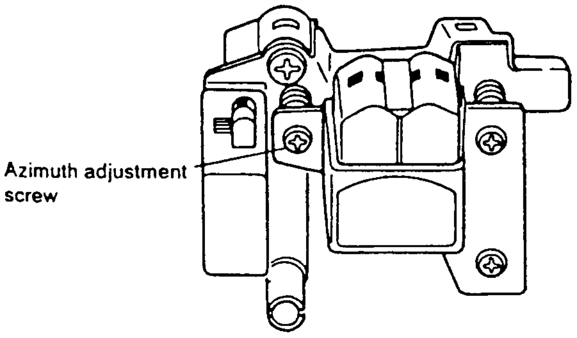
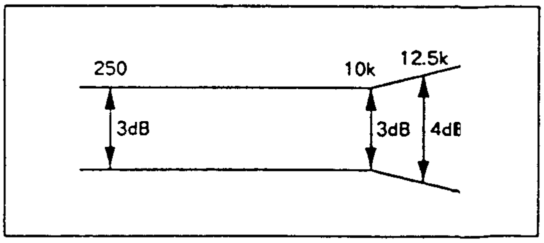

Azimuth adjustment screw

Fig. 6-2 Head azimuth adjustment

PLAY BACK



RECORDING

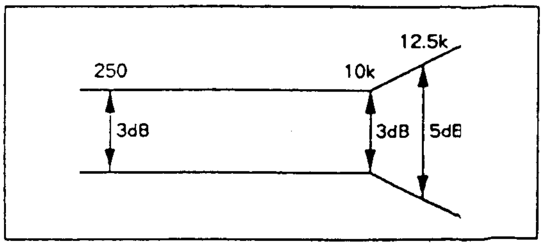


Fig. 6-3 Frequency response zone

PLAYBACK SECTION

1. Head Azimuth Adjustment

- Turn VR105, 106 to mechanical center positions.

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	PLAY	Play the 10 kHz/–20 dB section of STD–331B test tape.	Head azimuth adjustment screw. (See Fig. 6–2)	LINE OUT	Maximum playback signal level.	
2.	STOP	Lock the screw with screw lock after completing adjustment.				

2. Playback Level Adjustment

- This adjustment determines the DOLBY NR level, and must be performed with great care.

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	PLAY	Play the 315 Hz/0 dB section of the STD–331B test tape.	Deck	VR105 (Lch) VR106 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	–14.7 dBv	This adjustment must be performed accurately for proper Dolby level setting.

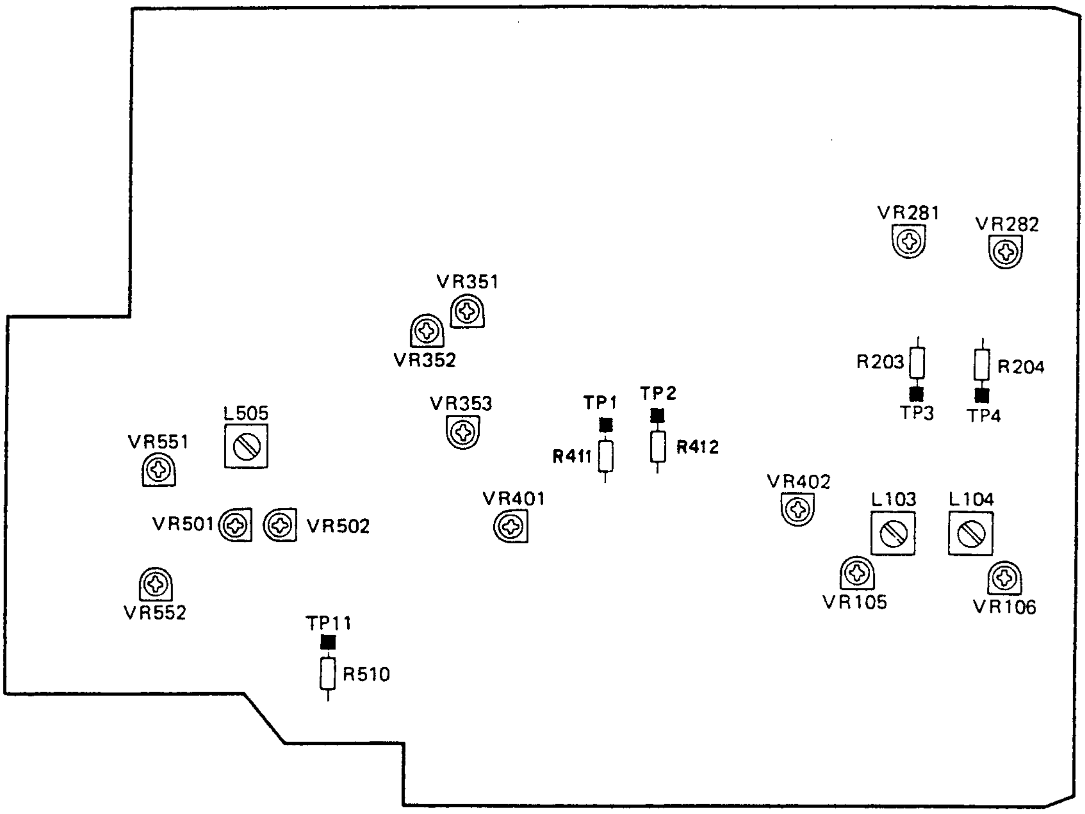

VR281
VR282
VR351
VR352
R203
R204
TP3
TP4
L505
VR353
TP1
TP2
VR551
R411
R412
VR402
VR401
L103
L104
VR501
VR502
VR552
VR105
VR106
TP11
R510

Fig. 6–4 Adjusting points

RECORDING SECTION

1. Bias Oscillator Adjustment

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC	Load the STD-610 test tape with no input signal.	Deck	L505	TP. 11	106 kHz ± 300 Hz	

2. Bias Trap Adjustment

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC	Load the STD-610 test tape with no input signal.	Deck	L103 (Lch) L104 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	Minimum output	

3. Recording Bias Adjustment

- Turn ON the DOLBY HX PRO switch on the front panel, and set the BIAS control to the center position.

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC/ PAUSE	Apply a 315 Hz/-20 dBv (-20VU meter reading) signal to the line input terminals and insert STD-630.			LINE OUT		
2.	REC →PLAY	Record and play back the 315 Hz signal and a 10 kHz signal at -20 dBv input level.	NOR	VR551 (L) VR552 (R)		Record and play back repeatedly, comparing the 315 Hz and 10 kHz playback levels, and adjust to 0±0.5 dB.	
3.		Record the 10 kHz/315 Hz, -20 dBv signal on STD-620 and play back.	CrO2	VR501 (L/R)		0 dBv ± 1.0 dB	
4.		Record the 10 kHz/315 Hz, -20 dBv signal on STD-610 and play back.	METAL	VR502 (L/R)		0 dBv ± 1.0 dB	
5.	Check distortion value after adjustment is completed and confirm that there is no underbias.						

4. Recording Level Adjustment

- Turn ON the DOLBY NR switch.

No.	Mode	Input signal & test tape	Adjustment location		Measuring location	Adjustment value	Remarks
1.	REC/ PAUSE	Apply the 315 Hz/0 dBv signal to the line input, and load STD-630 (NORM).	REC level control volume		TP. 3 (Lch) TP. 4 (Rch)	-15.2 dBv	
2.	REC →PLAY	Record and play back the 315 Hz/0 dBv signal.	Deck	VR401 (Lch) VR402 (Rch)	TP. 3 (Lch) TP. 4 (Rch)	Repeatedly record, playback and adjust so that the playback signal level becomes -15.2 dB.	Recording bias adjustment and recording level adjustment with STD-630 must be performed accurately as reference for BLE adjustment.
3.	REC →PLAY	Record the 315 Hz/0 dBv signal on STD-620 (CrO2), and play it back.	Check			-15.2 dBv ± 1 dB	
4.	REC →PLAY	Record the 315 Hz/0 dBv signal on STD-610 (METAL), and play it back.	Check			-15.2 dBv ± 1 dB	

5. Level Meter Adjustment

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	REC/ PAUSE	Apply a 315 Hz/–10 dBv (316 mV) signal to the line input terminals.	VR281 (Lch) VR282 (Rch)	TP. 1 (Lch) TP. 2 (Rch)	Always set the enlarged mode when adjusting. Adjust so that the 0 dB segment lights at a level of –15.2 ± 0.5 dBv (–15.2 ± 1.0 dBv in the normal mode).	Adjust by turning clockwise until the lamp lights up.

6. AUTO BLE Adjustment

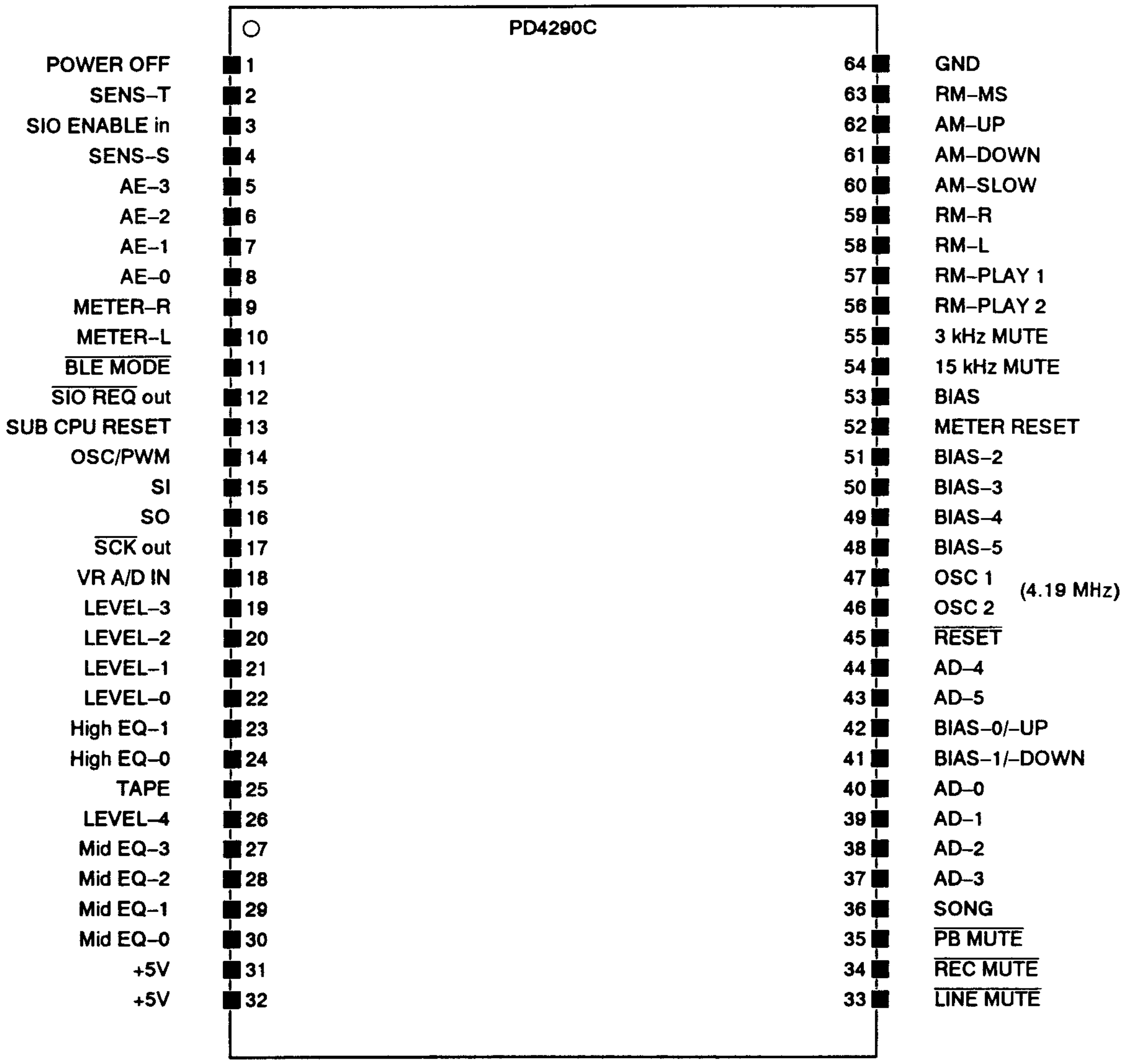
- BLE Adjustment must be performed after all other adjustments are completed.
- This adjustment should be performed in the test mode.
- Entering the test mode
  Press the MODE (COUNTER), RANGE and MONITOR keys on the front panel simultaneously, with the power ON. The unit enters the test mode and oscillates a 400 Hz signal.
  Thereafter, each time the START/CLEAR key is pressed, the oscillation frequency changes as follows: 3 kHz oscillation → 15 kHz oscillation → Release

No.	Mode	Input signal & test tape	Adjustment location	Measuring location	Adjustment value	Remarks
1.	–	REC LEVEL VR MIN or no signal input.	–	–	–	
2.		Press the three keys MODE (COUNTER), RANGE and MONITOR on the front panel simultaneously.	VR351	Level meter Rch	Adjust so that –3 dB on the level meter lights.	400 Hz adjustment
3.		Press the START/CLEAR key once.	VR352		Adjust so that –1 dB on the level meter lights.	3 kHz adjustment
4.		Press the START/CLEAR key once.	VR353		Adjust so that –1 dB on the level meter lights.	15 kHz adjustment
5.	When the START/CLEAR key is pressed again, the test mode is released.					

7. IC DESCRIPTIONS

7.1 PD4290C

7.1.1 Main CPU Port Arrangement PD4290C (BLE & Main Control)


PD4290C
POWER OFF 1
SENS–T 2
SIO ENABLE in 3
SENS–S 4
AE–3 5
AE–2 6
AE–1 7
AE–0 8
METER–R 9
METER–L 10
$\overline{\text{BLE MODE}}$ 11
$\overline{\text{SIO REQ}}$ out 12
SUB CPU RESET 13
OSC/PWM 14
SI 15
SO 16
$\overline{\text{SCK}}$ out 17
VR A/D IN 18
LEVEL–3 19
LEVEL–2 20
LEVEL–1 21
LEVEL–0 22
High EQ–1 23
High EQ–0 24
TAPE 25
LEVEL–4 26
Mid EQ–3 27
Mid EQ–2 28
Mid EQ–1 29
Mid EQ–0 30
+5V 31
+5V 32
64 GND
63 RM–MS
62 AM–UP
61 AM–DOWN
60 AM–SLOW
59 RM–R
58 RM–L
57 RM–PLAY 1
56 RM–PLAY 2
55 3 kHz MUTE
54 15 kHz MUTE
53 BIAS
52 METER RESET
51 BIAS–2
50 BIAS–3
49 BIAS–4
48 BIAS–5
47 OSC 1
46 OSC 2
(4.19 MHz)
45 $\overline{\text{RESET}}$
44 AD–4
43 AD–5
42 BIAS–0/–UP
41 BIAS–1/–DOWN
40 AD–0
39 AD–1
38 AD–2
37 AD–3
36 SONG
35 $\overline{\text{PB MUTE}}$
34 $\overline{\text{REC MUTE}}$
33 $\overline{\text{LINE MUTE}}$

7.1.2 I/O Matrix Table

	CrO2 (in) (Sub CPU)	METAL (in) (Sub CPU)	High EQ–1 (out) (Main CPU)	High EQ–0 (out) (Main CPU)
TAPE: NORMAL	L	L	1	0
TAPE: CrO2	H	L	1	0
TAPE: METAL	L	H	0	1

- Output standard value for setting LEVEL (5bit) : 01111
  Mid EQ (4bit) : 0111
  High EQ (2bit) : According to the table above.

7.1.3 PD4290C Pin Functions

<table>
<tr><th>Pin No.</th><th>I/O</th><th>Name</th><th>Function</th></tr>
<tr><td>1</td><td rowspan="10">I</td><td>POWER OFF</td><td>POWER OFF trigger input and rising edge input when power is OFF. Normally "L".</td></tr>
<tr><td>2</td><td>SENS-T</td><td>Rotation pulse input for the take-up side reel base. The tape end is detected when the signal change stops. Also, ATLC operation is based on the signal change.</td></tr>
<tr><td>3</td><td>SIO ENABLE in</td><td>When this signal from the sub CPU becomes "H", the main CPU starts communication with the sub CPU.</td></tr>
<tr><td>4</td><td>SENS-S</td><td>Rotation pulse input for the supply side reel base. When Ver REMAIN is ON, the operation for the remain function is performed by this signal. Also, when the signal change stops for 5 minutes with Ver REMAIN ON, PLAY or REC/PLAY mode changes to STOP mode.</td></tr>
<tr><td>5</td><td>AE-3</td><td rowspan="4">4-bit encoder input for position detection of the mechanism.
<table>
<tr><th>4-bit data</th><th>Mechanism mode</th></tr>
<tr><td>0000</td><td>PLAY, REC/PLAY</td></tr>
<tr><td>0010</td><td>PLAY/PAUSE, REC/PAUSE</td></tr>
<tr><td>0111</td><td>CUE, REVIEW</td></tr>
<tr><td>0100</td><td>STOP, PAUSE</td></tr>
<tr><td>1101</td><td>FF, REW</td></tr>
<tr><td>1001</td><td>EJECT</td></tr>
</table></td></tr>
<tr><td>6</td><td>AE-2</td></tr>
<tr><td>7</td><td>AE-1</td></tr>
<tr><td>8</td><td>AE-0</td></tr>
<tr><td>9</td><td>METER-R</td><td rowspan="2">Input of results from comparison of 6-bit output (AD-0 through AD-5) with both R and L channels.</td></tr>
<tr><td>10</td><td>METER-L</td></tr>
<tr><td>11</td><td rowspan="4">O</td><td>$\overline{\text{BLE MODE}}$</td><td>"L" is output during BLE tuning mode and test mode, and "H" is output at other times.</td></tr>
<tr><td>12</td><td>$\overline{\text{SIO REQ}}$ out</td><td>"L" is output when main CPU requests communication with sub CPU, and "H" is output at other times.</td></tr>
<tr><td>13</td><td>SUB CPU RESET</td><td>Reset output for resetting of sub CPU when power is turned ON/OFF and when the communication between main CPU and sub CPU is interrupted for a certain duration.</td></tr>
<tr><td>14</td><td>OSC/PWM</td><td>Tuning oscillator output in BLE mode, and at other times PWM output for position detection of the input volume.</td></tr>
<tr><td>15</td><td>I</td><td>SI</td><td>Serial input for communication with sub CPU.</td></tr>
<tr><td>16</td><td rowspan="2">O</td><td>SO</td><td>Serial output for communication with sub CPU.</td></tr>
<tr><td>17</td><td>$\overline{\text{SCK}}$ out</td><td>Clock pulse output for communication with sub CPU.</td></tr>
<tr><td>18</td><td>I</td><td>VR A/D IN</td><td>Input of results from comparison of PWM smoothed level signal and position detection level signal of the input volume.</td></tr>
<tr><td>26</td><td rowspan="15">O</td><td>LEVEL-4</td><td rowspan="5">BLE 5-bit LEVEL output.</td></tr>
<tr><td>19</td><td>LEVEL-3</td></tr>
<tr><td>20</td><td>LEVEL-2</td></tr>
<tr><td>21</td><td>LEVEL-1</td></tr>
<tr><td>22</td><td>LEVEL-0</td></tr>
<tr><td>23</td><td>High EQ-1</td><td rowspan="2">BLE 2-bit High EQ output.</td></tr>
<tr><td>24</td><td>High EQ-0</td></tr>
<tr><td>25</td><td>TAPE</td><td>Tape monitor output. Tape when "H", source when "L".</td></tr>
<tr><td>27</td><td>Mid EQ-3</td><td rowspan="4">BLE 4-bit Mid EQ output.</td></tr>
<tr><td>28</td><td>Mid EQ-2</td></tr>
<tr><td>29</td><td>Mid EQ-1</td></tr>
<tr><td>30</td><td>Mid EQ-0</td></tr>
<tr><td>33</td><td>$\overline{\text{LINE MUTE}}$</td><td>Mute control output for LINE OUT. Muting is ON when "L".</td></tr>
<tr><td>34</td><td>$\overline{\text{REC MUTE}}$</td><td>Mute control output for recording signal. Muting is ON when "L".</td></tr>
<tr><td>35</td><td>$\overline{\text{PB MUTE}}$</td><td>Mute control output for playback signal. Muting is ON when "L".</td></tr>
</table>

<table>
<tr><th>Pin No.</th><th>I/O</th><th>Name</th><th>Function</th></tr>
<tr><td>36</td><td>I</td><td>SONG</td><td>Blank detection signal input. Blank when "L".</td></tr>
<tr><td>43</td><td rowspan="8">O</td><td>AD-5</td><td rowspan="6">6-bit compensation level signal output for meter A/D.</td></tr>
<tr><td>44</td><td>AD-4</td></tr>
<tr><td>37</td><td>AD-3</td></tr>
<tr><td>38</td><td>AD-2</td></tr>
<tr><td>39</td><td>AD-1</td></tr>
<tr><td>40</td><td>AD-0</td></tr>
<tr><td>41</td><td>BIAS-DOWN</td><td rowspan="2">Control output for BLE power drive bias volume when Ver VR-BLE is ON. When DOWN is "L" and UP is "H", the volume rotates clockwise and the bias current increases. When DOWN is "H" and UP is "L", the volume rotates counterclockwise and the bias current decreases. The power drive bias volume stops when the output status is "L", "L" or "H", "H".</td></tr>
<tr><td>42</td><td>BIAS-UP</td></tr>
<tr><td>45</td><td>I</td><td>$\overline{\text{RESET}}$</td><td>Reset input for main CPU. Reset when "L"; programming starts when "L" → "H".</td></tr>
<tr><td>48</td><td rowspan="17">O</td><td>BIAS-5</td><td rowspan="4">Not used when Ver VR-BLE is ON.</td></tr>
<tr><td>49</td><td>BIAS-4</td></tr>
<tr><td>50</td><td>BIAS-3</td></tr>
<tr><td>51</td><td>BIAS-2</td></tr>
<tr><td>52</td><td>METER RESET</td><td>Used to speed up A/D operation in BLE mode. Meter circuit is discharged when "H".</td></tr>
<tr><td>53</td><td>BIAS</td><td>Control output for bias ON/OFF during recording. Bias is ON when "H".</td></tr>
<tr><td>54</td><td>15 kHz MUTE</td><td rowspan="2">Used in accordance with the test signal for BLE tuning. Muting is ON when "H". Both are ON when the signal is 400 Hz. Only 15 kHz MUTE is ON when the signal is 3 kHz. Both are OFF when the signal is 15 kHz.</td></tr>
<tr><td>55</td><td>3 kHz MUTE</td></tr>
<tr><td>56</td><td>RM-PLAY 2</td><td rowspan="5">For PLAY and REC (L) mode, PLAY torque is lowered only for the first 5 to 15 minutes of tape winding. During tape return and BLE rewind, tape speed is varied using the control lines of PLAY-2, PLAY-1 and MS.
<table>
<tr><th>Mechanism mode</th><th>PLAY-2</th><th>PLAY-1</th><th>MS</th><th>L</th><th>R</th></tr>
<tr><td>FF</td><td>L</td><td>L</td><td>L</td><td>L</td><td>H</td></tr>
<tr><td>REW</td><td>L</td><td>L</td><td>L</td><td>H</td><td>L</td></tr>
<tr><td>CUE</td><td>L</td><td>L</td><td>H</td><td>L</td><td>H</td></tr>
<tr><td>REVIEW</td><td>L</td><td>L</td><td>H</td><td>H</td><td>L</td></tr>
<tr><td>PLAY, REC (H)</td><td>H</td><td>L</td><td>L</td><td>L</td><td>H</td></tr>
<tr><td>PLAY, REC (L)</td><td>H</td><td>H</td><td>L</td><td>L</td><td>H</td></tr>
<tr><td>STOP, PAUSE, PLAY/PAUSE, REC/PAUSE</td><td>–</td><td>–</td><td>–</td><td>H</td><td>H</td></tr>
</table></td></tr>
<tr><td>57</td><td>RM-PLAY 1</td></tr>
<tr><td>63</td><td>RM-MS</td></tr>
<tr><td>58</td><td>RM-L</td></tr>
<tr><td>59</td><td>RM-R</td></tr>
<tr><td>60</td><td>AM-SLOW</td><td rowspan="3">Assist motor control output. When DOWN is "L" and UP is "H", the mechanism raises the head base, and when DOWN is "H" and UP is "L" it lowers the head base for ejection of the tape. SLOW output is set to "H" only during the servo operation after one assist motor operation and during the assist motor operation between the EJECT and STOP mode.</td></tr>
<tr><td>61</td><td>AM-DOWN</td></tr>
<tr><td>62</td><td>AM-UP</td></tr>
</table>

8. FOR CT–777–S/HEWM TYPE

CONTRAST OF MISCELLANEOUS PARTS

NOTES:

- Parts without part number cannot be supplied.
- The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "⊙" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

The CT–777–S/HEWM type is the same as the CT–777/HEM type with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		CT–777/ HEM type	CT–777–S/ HEWM type	
	Panel stay	RNT1090	RNT1110	
	Power button	RAC1410	RAC1503	
	Function knob	RAC1411	RAC1502	
	Push knob	RAC1413	RAC1505	
	Knob (B)	RAC1414	RAC1492	
	Mode knob	RAC1552	RAC1611	
	Slide SW knob	RAC1562	RAC1522	
	Side rubber	REB1094	REB1128	
	Door	RNK1495	RNK1731	
	VR knob assembly	RXA1281	......	
	VR knob	......	RAC1496	
	Door panel	RAH1844	RAH1845	
	Bonnet	RXX1376	RXX1377	
	Front panel assembly	RXX1385	RXX1386	
	Operating instructions (Dutch, Spanish, Portuguese, Swedish)	RRD1109	......	
		RHG1279	RHG1280	
	Packing case	RXX1417	RXX1418	
	Door assembly			

9. SPECIFICATIONS

System .... 4 track, 2-channel stereo
Heads
  Recording and playback head:
  [CT-900S, CT-777]
  Hard permalloy playback head and Hard permalloy recording head combination × 1
  Erasing head: Ferrite head with sendust gurd × 1
Motor .... DC servo capstan motor × 1
  DC reel motor × 1
  DC auxiliary motor × 1
Wow and Flutter
  [CT-900S, CT-777] .... No more than 0.023%(WRMS)
  No more than ±0.056% (DIN)
Fast Winding Time .... Approximately 75 seconds
  (C-60 tape)

Frequency Response
  −20 dB recording:
  [CT-900S, CT-777]
  Metal tape .... 15 to 22,000 Hz
  Chrome tape .... 15 to 21,000 Hz
  Normal tape .... 15 to 21,000 Hz
Signal-to-Noise Ratio (Dolby NR off)
  [CT-900S, CT-777] .... More than 60 dB
Noise Reduction Effect
  Dolby B-type NR ON .... More than 10 dB (at 5 kHz)
  Dolby C-type NR ON .... More than 19 dB (at 5 kHz)
  Dolby S-type NR ON (CT-93, CT-900S) .... More than 22 dB
  (at 5 kHz)
Harmonic Distortion .... No more than 0.6% (0 dB)
Input (Sensitivity)
  LINE (INPUT) .... 60 mV (Input impedance 47 kΩ)
Output (Reference level)
  LINE (OUTPUT) .... 316 mV (Output impedance 1.8 kΩ)
  Headphone .... 2.3 mW
  (Load impedance 8 Ω, PHONES LEVEL control max.)

Subfunctions

- Super AUTO BLE system
- Dolby B-type and C-type noise reduction systems
- MPX filter
- Level meter with 2 modes peak hold selection (16 + 1 segments)
- Level meter range selection (wide/expanded)
- 4-digit electronic tape counter with mode selection (CT-900S, CT-777: Normal/Time)
- Auto monitor selection (Tape/Source)
- Display off
- Music search (over ±15 selections)
- Automatic Tape Loose Canceller (ATLC)
- Tape return/Return play
- Auto space recording mute
- Auto tape selector
- Playback/recording timer start function
- CD•DECK SYNCHRO recording
- Headphones jack with level control
- Power eject (Open/Close)
- Repeat playback

Miscellaneous

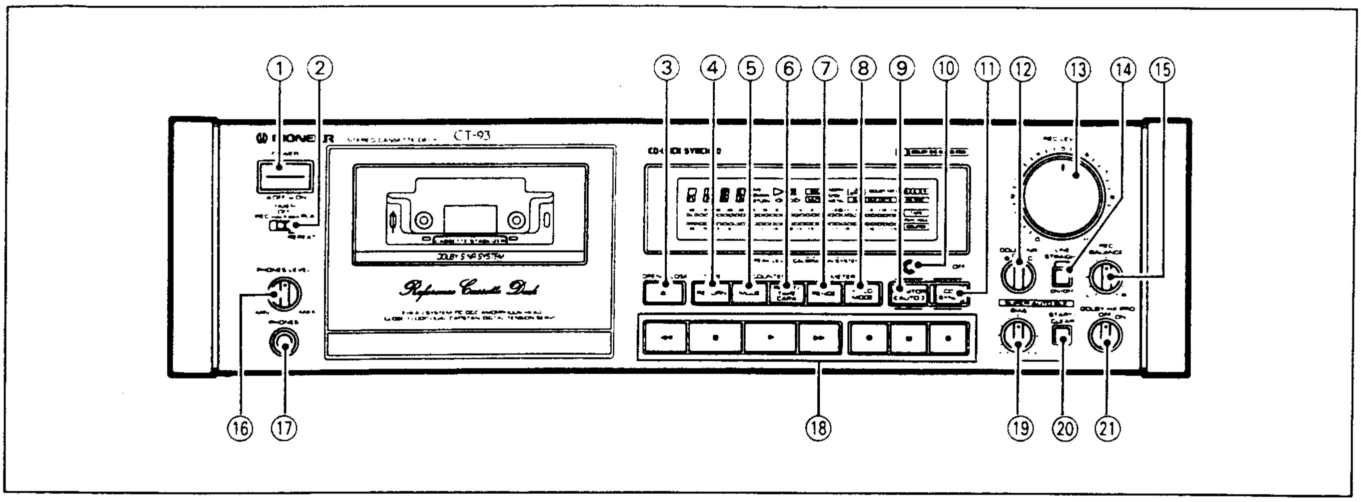
Power Requirements
  European model .... AC 220−230 Volts∼, 50/60 Hz
  U.K. model .... AC 230−240 Volts∼, 50/60 Hz
  Multi-voltage model .... AC 110/120−127/220/240 V
  (switchable), 50/60 Hz
Power Consumption
  [CT-777] 19W
Dimensions
  [CT-979, CT-900S, CT-777] .... 420(W) × 135(H)
  × 370(D) mm
Weight (without package)
  [CT-777] .... 7.6 kg

Accessories

Operating instructions 1
Connection cord with pin plugs 2
CD•DECK SYNCHRO control cord 1

NOTE:
Specifications and design subject to possible modifications without notice, due to improvements.

10. PANEL FACILITIES



① **Power switch (POWER ■ OFF/▄ ON)**

② **Timer mode/repeat play switch**
(TIMER REC/OFF/PLAY-REPEAT)

③ **Open/close button (OPEN/CLOSE ⏏)**

Press this button to open or close the cassette door. Whenever inserting or removing a cassette tape, be sure that the power is turned ON.

NOTE:
If the cassette door is closed while the unit is turned OFF, and the power is then turned ON, the cassette door may open and close after pressing one of the operation buttons. This occurs when the microprocessor resets the door mechanism to its initial state and does not indicate any malfunctioning of the unit.

④ **Tape return button (TAPE RETURN)**

This button is used in the normal tape counter mode to fast forward or rewind the tape to a point near the counter reading "0000."

⑤ **Counter mode button (COUNTER MODE)**
[CT-900S, CT-777]

Each time this button is pressed, one of the two mode (Normal tape counter/Time counter) is set in sequence.

⑥ **Counter reset button (COUNTER RESET)**
[CT-900S, CT-777]

Reset the counter indication to "0000."

⑦ **Level meter range selector button (METER RANGE)**

Selects wide or expanded range for the level meter.

⑧ **Level meter hold mode button (METER HOLD MODE)**

Selects the display mode of the peak level.
When press this button so that the HOLD indicator lights up, the level meter holds the maximum level indications of the signal. To erase the maximum level indications, press this button again. When the HOLD indicator goes off, the level meter holds peak indications for about 1.2 second.

⑨ **Monitor selector button (MONITOR [AUTO])**

Used to monitor the source sound or just recorded sound during recording.

- When the unit is set to record or playback mode, the TAPE indicator light up and the monitor mode is automatically selected.

⑩ **Display off button (DISPLAY OFF)**

Press this button to turn off the function display.

⑪ **CD•DECK SYNCHRO recording button (CD SYNC)**

⑫ **DOLBY* NR switch**
[CT-979, CT-777]

3-position (B/OFF/C)

*
- *Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.*
- *"DOLBY", the double-D symbol DD and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.*

⑬ **Recording level control (REC LEVEL)**

⑭ **[CT-93, CT-979 only]**
Line straight button/indicator (LINE STRAIGHT)

When press this button so that the indicator lights up, the signal is passed the REC BALANCE control circuits.

⑮ **Recording balance control (REC BALANCE)**

⑯ **Headphones level control (PHONES LEVEL)**

⑰ **Headphones jack (PHONES)**

⑱ **Operation buttons**

◀◀: Rewind/music search
■ : Stop
▶ : Playback
▶▶: Fast forward/music search
● : Recording
❚❚ : Pause
○ : Recording mute

⑲ **[CT-93, CT-979 only]**
Recording bias control/indicator (BIAS)

If you desire, you can readjust the recording bias condition after the AUTO BLE tuning.

⑳ **SUPER AUTO BLE button (START/CLEAR)**

㉑ **[CT-93, CT-979 only]**
DOLBY HX PRO switch (OFF/ON)